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HOSPITAL DISTRICTS TO BE VOTED ON

Texans interested in adequate hospital facilities and in the care of indigent patients on a local basis have a job to do before November 2. On that date, as a part of the general election, voters will decide whether or not to amend the state Constitution to permit the establishment of hospital districts in the larger counties.

Submission of the proposed amendment to the electorate was approved overwhelmingly by the Legislature last spring in the adoption of SJR 2. However, the tendency of voters always is to scratch an amendment if they are not fully acquainted with and sold on its provisions. The following points, if called to the attention of citizens before election day, may help secure passage of the amendment:

1. Creation of countywide hospital districts in counties with a population in excess of 190,000 and in Galveston County would be authorized but would not become mandatory.

2. A hospital district would be permitted to issue bonds and to assume bonded indebtedness already incurred for the acquisition, construction, maintenance, and operation of hospitals owned and operated by the county or jointly by the county and a city within the county and also to levy a tax not to exceed 75 cents per $100 valuation on all taxable property within the district provided that taxpaying voters in the county approve.

3. The hospital district would become responsible for providing medical and hospital care to needy inhabitants of the county, and thereafter the county and cities therein would not levy taxes for hospital purposes nor would the state make direct appropriation for the construction, maintenance, or improvement of the hospitals.

Voters face important choices regarding candidates for office and other constitutional proposals on November 2, but the amendment mentioned is especially dear to the thinking of those concerned with health care.

BE SURE TO VOTE NOVEMBER 2

LEGISLATORS AT HOME

Members of the medical profession and their wives are becoming accustomed to writing, wiring, or telephoning their representatives in Congress when measures detrimental to the public health are pending. But how many, expecting their wishes to be reflected in their Congressmen's voting, bother to talk with them when they are home?

United States Senators and Representatives are now in their home districts between sessions. This is the appropriate moment for physicians to introduce themselves personally to their Washington representatives, to thank them for past favors, and to explain the point of view of medicine. It should be remembered, too, that these conversations should be dialogues, not monologues; Congressmen have their questions and comments, their views to air, their problems to point out, and physicians can learn a lot if they will listen.

Although a meeting with a Congressman can be strictly business, it might be a pleasant gesture to converse over a dinner table or after a theater party with the representative and his wife as guests—not all the talk needs to be legislative.

It might be wise to become acquainted also with those who will enact laws in the Texas Legislature next January. Letters to Austin should be more effective if those who receive them can picture the persons behind the signatures.

The public relations "tip of the month" is to get in touch with Senators and Representatives while they are at home. It is a tip which may lead to an enjoyable contact and certainly should lead to a helpful one.

VIEWPOINT IS IMPORTANT

Society is built upon differences—differences in tastes and differences in abilities. Most of us can do one thing better than we can another, and some things we cannot do at all. So it is with the so-called physically handicapped, many of whom cannot do some things but can do others extremely well. Blindness, loss of an extremity, or a damaged heart, although creating more problems than most persons have to overcome, does not mean that a person is a being apart.

The first week in October annually is National Employ the Physically Handicapped Week. This observance is designed to focus attention on the fine job most handicapped persons can do if they are given an opportunity to use their unimpaired faculties.

Physicians are in an enviable position with respect to this nationwide program. It often is their privilege to bring back to near health those who have been stricken with disease or have suffered accident. It is their duty to instill in such persons the will to forget the past and to look forward to a productive and happy future. It is their responsibility to help these patients in overcoming residual physical and emotional barriers by informing them of the many agencies for rehabilitation ready to aid them in their readjustments. First, of course, physicians themselves need to learn what therapeutic, occupational, and financial assistance is available from private or public sources. It is their obligation, because of their understanding of the human body and its ability to be reeducated and to compensate, to interpret to reluctant employers the possibilities for using handicapped employees advantageously. Finally, of course, they may be able to hire a legless bookkeeper or a blind darkroom technician or otherwise heed directly the slogan, "It's good business to hire the handicapped."

The physically handicapped need to be viewed in positive perspective. No longer the subjects for extermination or ridicule as historically they were, these people next door deserve rehabilitation, encouragement, and a place in which they can contribute their fair share to society and in which they can achieve some personal satisfaction.

HEAL THYSELF

"Reason's whole pleasure, all the joys of sense,
Lie in three words—health, peace, and competence."
—Alexander Pope: *Essay on Man.*

For someone who preaches the importance of preventive medicine, the physician habitually is a sorry example. He drives himself too hard, seldom has a physical check-up until something obviously is wrong, and leaves his wife to keep up with her own annual examination and routine checks of their youngsters.

Up-to-the-minute statistics to prove those contentions are not at hand, but between 1938 and 1942, physicians in the United States 45 years of age and older had a slightly shorter life expectancy than the general white population. Physicians had a lower death rate from most infectious diseases, conditions treated surgically, and accidents, but a higher rate from the degenerative diseases and from suicide.*

The age at death of English physicians who died between 1897 and 1916 and who were listed in "Who's Who" averaged 69.5 years, whereas the average age at death of physicians whose obituaries were noted in *The Journal of the American Medical Association* from 1950 to 1952 was only 67.1 years.†

Dr. Merrill Shaw, Seattle general practitioner who was vice-president of the American Academy of General Practice at the time of its annual meeting last March, said he did not remember a single doctor ever coming to him for a physical examination during his twenty years of practice.

These facts are indicative, at least, of the doctor's inclination to look after the other fellow's health and let his own take care of itself.

The Academy of General Practice, sensing that physicians display a singular lack of interest in their patients (who want their doctors to stay alive, alert, and able) and in themselves (who could learn to taste better and longer the fruits of their labors) by ignoring some of the basic principles of staying healthy, are promoting a nationwide campaign to assure "A Family Doctor for Every Doctor's Family." The Woman's Auxiliary of the American Medical Association is cooperating in the project. In fact, the Auxiliary for a long time has been beating the drums for annual physical examinations for each member of the physician's household.

C. S. Lewis aptly pointed out: "The Future is something which everyone reaches at the rate of sixty minutes an hour, whatever he does, whoever he is."‡ What one does with those sixty minutes, however, determines to some degree what the Future may bring. For a long earthly Future as full of good health—physical and mental—as modern medicine can make it, a physician and his family need to take an occasional but appointed sixty minutes for a visit to a colleague and then need to follow his advice.

Dublin, L. I., and Spiegelman, M.: Longevity and Mortality of American Physicians, 1938-1942; Preliminary Report, J.A.M.A. 134: 1211-1215 (Aug. 9) 1947.

†*Poynton, O.: Death and Distinction, J.A.M.A. 153:1379-1380 (Dec. 12) 1953.*

‡*Screwtape Letters, New York, Macmillan Co., 1941.*

CURRENT EDITORIAL COMMENT

ABC'S OF ACCIDENT AND HEALTH INSURANCE

Social purpose combined with free enterprise has produced spectacular results in today's development of voluntary health and accident insurance. One out of every two persons today has some form of surgical insurance; ten years ago it was only one out of fourteen. One out of four today has medical insurance, most commonly to pay for in-hospital calls by doctors for nonsurgical treatment. This amounts to a tenfold increase in ten years. These figures indicate the remarkable growth in protection provided by Blue Cross and Blue Shield and the more than 800 insurance companies that sell accident and health insurance.

This department of the JOURNAL *presents editorial comments on current items pertaining to the science, art, and practice of medicine, contributed by members of the Texas Medical Association and others closely associated with the medical profession of Texas. Invitation is hereby extended to any member of the Texas Medical Association to submit such discussions for this department. The discussions preferably should be between 300 and 500 words in length.*

With all this rapid growth, traditional relationships between doctor and patient have not been disturbed. During the 1930's it was often difficult for a doctor to get more than 60 per cent payment of his outstanding bills, but today an American Medical Association authority estimates doctors receive payment on more than 95 per cent of their patients' medical bills. From information supplied by the AMA and insurance personnel, it is conservatively estimated that on the average each doctor receives $2,500 a year in payments from insurance companies alone.

Payments to doctors as well as to hospitals are derived through three main types of insurance policies currently on the market. They are surgical insurance, which specified scheduled amounts for listed procedures or unlisted ones of like difficulty; medical insurance, which provides funds to help pay for calls made by the doctor or for visits to his office by the patient; and hospital insurance, which at times benefits the doctor indirectly in that it eases the financial load on the patient and thereby makes available for the payment of doctor bills money which the patient otherwise might have spent for hospital care. Hospital expense insurance pays for room and board charges up to a certain amount for a specified number of days, with an additional allowance to pay for other hospital charges.

These policies are often termed the basic coverages. Their purpose is to provide timely benefits in sufficient amounts to prevent financial hardship on the family in case of accident or sickness. Benefit payments, whether to the insured person or to the doctor or hospital by assignment, are running in the neighborhood of $2 billion a year.

Frequency of claims in accident and health is probably greater than in any other line of insurance. In fact, a health or accident benefit payment is made for approximately one out of every ten insured Americans every year. Insurance companies have to rely on doctors to prevent excessive use by the patient, one of the things that will most quickly make the policy too costly to buy.

Accident and health insurance does not manufacture funds to pay the cost of medical care. It allocates, saves, and distributes them. In a sense it is a method of prepayment by a group of policyholders, combined with protection and peace of mind for the insured.

So that one policyholder will not take advantage of the others, individual or family policies contain certain safeguards, including waiting periods, exclusions, and limitations on benefits. With group insurance, however, fewer safeguards of this kind are needed to protect the other policyholders since a reasonable number of healthy persons will be in the group.

From the viewpoint of price to the policyholder, group insurance has the advantage of wholesale merchandising over retail selling. But often a person will find that his benefits under group insurance are not adequate for his individual needs. Or he may not be a member of a group that offers insurance. Sometimes having an individual type policy is the only way he can get health and accident protection since there are certain legal and practical limitations on group insurance.

Through individual policies a person can purchase a selection of coverages closely tailored to meet his own objectives. Guaranteed renewable or noncancellable insurance can carry a policyholder up to a certain age, maybe 60 or 65 years. The company may neither cancel the policy nor refuse to renew it so long as premiums are paid when due or within the grace period. It is more expensive than the cancellable contract. The cancellable type falls into two categories. One type may be cancelled by the insurer without prejudice to any pending claim by written notice to the insured and the return of the pro rata premium. The other type may not be cancelled during the term for

which the premium has been paid and accepted by the company, but the insurer may refuse to renew on any premium due date.

Beyond hospital-medical-surgical insurance there are two additional types of protection that are going a long way toward helping pay the costs of ill health. Income replacement, sometimes called disability or loss-of-income insurance, is available individually or through groups. Funds are provided to help maintain a standard of living and to help meet bills (medical included) when the regular source of income is cut off. Monthly or weekly benefits are given for as long as two or more years when a person cannot work. Lump-sum benefits are provided for loss of sight or limb. Insurance companies are providing income replacement insurance for about 30,000,000 Americans today. The other type is major medical or catastrophe insurance, which provides protection against the huge bills that ordinarily could not be met by a person or family or for those bills that would throw the family budget out of kilter for several years.

Major medical expense insurance is a relatively new kind of protection, the first policies being written in 1949. Today, more than fifty companies are insuring 1,250,000 people under major medical contracts.

There are three important features about major medical expense insurance contracts. First, they are usually written with a $100 or $500 deductible clause, as in automobile collision insurance. Over and above the deductible amount, most policies pay 75 per cent of the bill, with the insured paying the remainder. This feature, called coinsurance, is the second important element of major medical contracts. Found in one form or another in some other types of insurance, it has the effect of keeping the individual from demanding excessive medical treatment and, at the same time, holding the premium at a level the average person can afford. With the increasing demand of patients for medical treatment, this feature becomes highly important. As a third feature, major medical policies have a top limit of payments sometimes as high as $2,500 or even $10,000.

Most major medical expense insurance is geared to over-all medical expense of the policyholder, regardless of whether it results from hospital care, home care, or medical treatment bills. It provides benefits to pay for medical specialists whose services are not now included under the regular medical-surgical policies.

Insurance leaders state that future objectives include programs in which a man with dependents can obtain a policy under which at least three-fourths of his expense for medical care would be covered, except for the minor items which could be provided more efficiently out of his own pocket rather than through insurance.

HEALTH INSURANCE COUNCIL,
Chicago, Illinois.

208 South LaSalle Street.

This is the second in a series of four articles prepared at the request of the Hospital-Insurance-Physicians Joint Advisory Committee of Texas. The final papers will offer suggestions about what to tell patients who ask for advice on buying and using voluntary insurance.

CANCER DEATHS

Persons who survive a cancer operation by several years have an encouraging life expectancy, according to a recently completed study by the Society of Actuaries. Included in a study of 725,000 policies covering persons with some known physical impairment were about 1,000 persons who had been operated on for cancer five years or more prior to acceptance for the insurance. The study covered the period from 1935 to 1950.

Among the cancer group, the ones who had been accepted as standard risks showed a mortality experience during the fifteen years about equal to standard. Those accepted for extra risk policies showed a death rate about twice the normal for standard risks, with all excess mortality due to recurrences of cancer. Analysis of the experience of persons reporting a family history of the disease showed, for all sites of cancer combined, no significant tendency for it to be hereditary.

"The Doctor"

A realistic drama depicting a day in the life of a middle-aged physician will be televised on the December 7 "Cavalcade of America" show. The show, entitled "The Doctor," stars Dean Jagger and is expected to duplicate the drama in every practicing physician's life and to win greater understanding by the public of the job he has to do.

ORIGINAL ARTICLES

A WORD IN FAVOR OF MORE THERAPEUTIC SKEPTICISM

WILLIAM H. GORDON, M. D., F.A.C.P., Lubbock, Texas

MEDICAL philosophies have changed during the past century, and whereas change is necessary for progress, it does not follow that all changes lead to progress. In the field of therapy there have been unbelievable changes. Most of them have been good changes; some of them have not been good. It would appear at times that we have completed a cycle of therapeutic practices, starting with the premise of empiricism, passing through a period of relative nihilism, only to return to more empiricism. We need, as Sir William Osler[1] stated, "a stern iconoclastic spirit which leads not to nihilism, but to an active skepticism—not the passive skepticism born of despair, but the active skepticism born of the knowledge that recognizes its limitations and knows full well that only in this attitude can true progress be made."

Dr. Osler could be regarded as the "father of modern scientific medicine." Before his time clinical medicine was on a shaky footing, not far removed from beliefs firmly entrenched in folklore, superstitions, and at times, quackery. His study of the patient, painstaking attention to details, and correlation of subjective and objective findings with postmortem findings, gave clinical medicine the impetus necessary to establish it on a firm scientific basis. This knowledge excluded the likelihood of benefit from indiscriminate drugging, as was practiced, and it brought about the concept of the difference between the giving of medicine and the treatment of disease.

Osler's death in 1919 occurred on the threshold of modern therapeutic advancement. During the subsequent thirty-five years, we have been deluged with so many alleged specifics—many of them actual—that the adherence to a "spirit of active skepticism" has been difficult. Nevertheless, its need is evident. One needs to view medical therapeutics objectively and to ask several questions. Have we slipped back into the practice of giving medicine rather than treating disease? Have we not, perhaps, stressed the administration of wide spectrum antibiotics to the detriment of accurate diagnosis? Now that we have so many good drugs with which to treat disease, have we not relied on shotgun management of the problem rather than finding which specific drug would do the job best? Finally, is this concept important?

One can cite the decline of the nation's mortality and morbidity figures, which surpasses that of any period in medical history. One can cite also the shortening of the average hospital stay. Is this all there is to the practice of medicine? If this is our only goal, we have been successful. Should we not ask ourselves if, by unrestrained practices of this sort, we are losing some of the scientific approach to treatment that was stressed by our medical forefathers and that is necessary for good medical practice?

Because of our excellent therapeutic agents, drugging is more effective now than it was in Osler's day, but this fact detracts little from his statement,[1] "in the fight which we have to wage incessantly against ignorance and quackery among the masses, and the follies of all sorts among the classes, diagnosis, not drugging, is our chief weapon for offense." Some of us are too prone to administer drugs first and to diagnose later, that is if the first salvo of drugging is ineffective.

Let us review some aims of medical therapy. An old medical axiom expresses the thought that physicians "cure sometimes, benefit often, and give comfort always." There are few of us who have not had our lecturers in therapeutics stress an obvious fact that in treatment if our measures do not benefit, they should do no harm. Every practicing physician is aware of the many patients who seek relief from functional complaints. Office psychotherapy has commonly been accompanied by some medicine that may not be specific in its actions, but it bolsters the belief that active treatment is being instituted. The old family physician brought about many miraculous cures through limitless understanding and bread pills. He was one of the first to use that which is now called psychosomatic medicine. The same philosophy is now practiced, but antibiotics, vitamins, hormones, and many other active and expensive agents are prescribed instead of bread pills. A physician should not lose sight of the fact that these may do harm, and he should wonder if they are always necessary.

Truly, the practicing physician is bombarded daily by requests for treatments of a self-diagnosed ailment, and pressure is put on the doctor to use some new wonder drug reported in the latest Digest of

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World Affairs. Is the rationalization that "if I don't give it, someone else will" enough to cause the profession at large to relinquish its right to make medical decisions and to prostitute these expensive and, when properly used, marvelously effective agents? One must remember that when these agents are used without proper indication not only may they be ineffective but they actually may do much harm.

One should not be unreceptive to new ideas, but as Osler suggested, one should hold an active skepticism toward new methods and new agents. Simply because some investigator has made a glowing report of the effectiveness of an agent does not always lead to the fact that others can obtain the same effect. This is no reflection on the writer or his scientific honesty or ability. Rather, it is the recognition that enthusiasm at times may color judgment. It has been said that the effectiveness of the therapeutic agent is often proportionate to the personality of him who gives it.

Despite every attempt being made to the contrary, the fads creep into medical thinking and practice. These fads may pertain to diets, surgery, ambulatory versus bed management, and the use of this or that therapeutic agent. Without detracting from the great good that has been done by the commercial pharmaceutical houses, we should reserve judgment on the effectiveness of a new agent that is presented by a personable and enthusiastic representative until its worth has been well established.

SUGGESTIONS

To be more specific in our dedication of aims, the following suggestions are listed:

More time and more money spent on diagnostic procedures perhaps can shorten an illness and eliminate many expenses stemming from indiscriminate drugging.

A clear understanding of the patient's illness and of the pharmacodynamics of the agent to be used is necessary for proper treatment.

Recognition of uncomfortable side effects or actual dangers attending the use of a drug in comparison with the possible good that can be expected may alter the decision as to what agent is to be used.

Too early and indiscriminate surgery, roentgen-ray therapy, or drugging may cloud an already cloudy picture without benefiting either the clinical course of the patient or the understanding of the clinician.

Our modern philosophy that doing *something* is a step in the right direction does not always hold true. In certain instances, "tincture of time," an effective agent when properly used, might be encouraged.

More time spent in listening to the patient's story or examining him and less time used in writing prescriptions, giving shots, or writing orders on the chart probably will result in better medical practice.

Finally, therapeutic nihilism should not be our aim in this modern era in which we are blessed with so many things with which to do good; rather, we should remain steadfastly against their misuses. By so doing, our patients will be safeguarded, our profession will avoid criticism, and we physicians will gain in stature in the eyes of those who follow us.

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2022 Broadway.

CATASTROPHIC ACCIDENTS

Accidents killing five or more persons took less than half the number of lives in the United States during the first six months of 1954 as during the comparable period the previous year, statisticians of the Metropolitan Life Insurance Company report. There were slightly over 500 deaths during the first half of this year.

The greatest decrease in catastrophic deaths was in civilian aviation and in tornadoes. In general, the trend was toward increases in catastrophic deaths in military aviation and in dwelling and apartment fires.

The largest single catastrophe this year was the flood in Southwest Texas which cost twenty-three lives.

Thyroid Gland Essay

The best essay submitted concerning original work on problems related to the thyroid gland will win the Van Meter award of $300 from the American Goiter Association at its meeting in Oklahoma City, April 28-30, 1955. Two honorable mentions will also be awarded.

The essays, which may cover either clinical or research investigation, must not exceed 3,000 words and must be submitted by January 15, 1955, to Dr. John C. McClintock, Secretary, 149½ Washington Avenue, Albany, N. Y.

VITAMIN C IN ELDERLY PATIENTS

Elderly persons show a low level of vitamin C in their blood, it was noted in a study by three Boston physicians in the August issue of *Geriatrics*. The low vitamin C content in the foods they eat or the losses of the vitamin in food preparation are possible causes. One hundred and forty aged patients were observed in three mixed groups of well and chronically ill persons by Drs. Leo J. Cass, Willem S. Frederik, and J. D. Cohen. They reported the rapid rise in the vitamin C level when the patients received orange juice or ascorbic acid.

"Frozen concentrated orange juice, processed under low temperature evaporation, retains about 98 per cent of its vitamin C content and hence is an excellent source of this vitamin, equal to fresh orange juice," they added.

Industrial Medicine Course

The University of Texas Postgraduate School of Medicine is sponsoring a course in Industrial Medicine, given each Tuesday evening, October 12 through November 16, at the auditorium of the M. D. Anderson Hospital and Tumor Institute. Dr. V. C. Baird, Houston, is instructor in charge, and each program is composed of three thirty-minute speeches plus a question and answer period.

RECENT ADDITIONS TO THE THERAPY OF NEUROLOGIC CONDITIONS

F. KEITH BRADFORD, M. D., Houston, Texas

THE most striking annual progress in therapy in the fields of neurology and neurosurgery has occurred in the increased usefulness of antibiotics in combating infections of or threatening the central nervous system. Although newer antibiotics have increased our armamentarium, the improvement in mortality statistics has largely resulted from increasing and standardizing dosages of the older antibiotics. Sulfadiazine in adequate dosage is used in conjunction with the antibiotics when the organism is sensitive. Results are greatly improved by early diagnosis.

When reasonable probability of meningitis exists, spinal puncture should be used promptly to confirm the diagnosis. Cultures are often negative if antibiotic therapy is undertaken blindly before a specimen of cerebrospinal fluid is taken. Therapy is greatly hampered if the causative organism is not known. When the organism has been isolated, tests of sensitivity to various antibiotics can aid in selecting the most efficacious ones. When such steps are taken promptly, there need be no delay in initiating adequate provisional therapy, which can be altered as subsequent bacteriologic tests indicate.

A serious problem in diagnosis has resulted from the prevalent use of short term antibiotic therapy in treating symptoms of the upper respiratory tract. Among the many patients receiving such short term treatment are significant numbers of patients whose "respiratory symptoms" were prodromes of meningeal infections. Although cure without a diagnosis being made undoubtedly occurs, many other patients later develop a modified clinical picture of meningitis. In such instances the cerebrospinal fluid often will show a predominance of lymphocytes even though a pyogenic organism is responsible for the infection. Often bacteriologic cultures are negative, making sensitivity tests impossible and the choice of antibiotics difficult. Organisms may have developed resistance to antibiotics, and treatment is ineffectual or prolonged. Modified pyogenic infections often resemble tuberculous infections and are differentiated only with the greatest difficulty.

In treating meningeal infections, it is ideal to strike early and hard, usually with antibiotics and sulfonamides. Ideally, the infection is brought under control before any exudates can undergo organization and threaten obstruction of the cerebrospinal fluid pathways or loculation within the subarachnoid space. The response to treatment must be followed by careful, repeated spinal punctures. Unfortunately, there are physicians who have opposed repeated spinal punctures in the course of meningitis, probably as a result of the relatively certain response resulting from the treatment of meningococcic meningitis. Other organisms are not so tractable.

Intrathecal therapy with penicillin or streptomycin is not desirable in infections running a favorable course but may be necessary in others. Catastrophe from intrathecal injection per se is avoided if 10,000 units of penicillin or 0.01 Gm. of streptomycin is injected diluted to 10 cc. with normal saline or cerebrospinal fluid.[2] This, the adult dosage, probably can be doubled safely. Larger amounts, often ten or more times the recommended dosage, have been given as a result of erroneous calculation with death or paralysis resulting. Streptokinase-streptodornase mixtures have been used at times intrathecally with the intention of dissolving exudates to prevent organization. This use is still experimental and cannot be recommended.

Not infrequently there is a period of increased cerebrospinal fluid pressure following an otherwise satisfactory response to therapy. Often this state is due to no more serious complication than a temporary defect in the absorptive mechanism of the cerebrospinal fluid. Repeated spinal drainage usually prevents serious complications in such cases and results in the gradual return of pressure to normal.

Intracranial complications of acute otitis media, mastoiditis, and sinusitis are rare when the primary infection is treated adequately. However, a patient with chronic middle ear infection may develop a brain abscess years after the infection has become relatively dormant. Also, the type of frontal sinus infection which occasionally follows diving may produce osteomyelitis of the frontal bone and intracranial infection before its serious nature is recognized. With modern methods of treatment, acute brain abscesses may be aborted or may be permitted to wall off and become chronic. Although surgical drainage is much less frequently necessary with antibiotic therapy, the indications are unchanged. Mortality is greatly re-

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duced even in acute brain abscess which must be operated upon when a fatal increase in intracranial pressure threatens. Multiple drainage of subdural abscesses, excision of involved bone in osteomyelitis, and other sound surgical methods still must be used and stand a far greater chance of success with the addition of the antibiotic drugs.

Favorable results have been reported in those cases of Guillain-Barré[1, 4, 6] paralysis following the malignant pattern of Landry's ascending paralysis. ACTH and cortisone administered in dosages up to 400 mg. in twenty-four hours have produced marked prompt improvement in paralysis. Relapses have occurred with withdrawal of the hormones, and prompt responses have followed resumption of treatment. Proper precautions and care are essential in administering either of these potent hormones. It appears likely that a fatal march of paralysis may be circumvented with the use of these hormones but that the course of the illness is not shortened. Promising results have been reported also by the early treatment of Bell's palsy with cortisone in similar dosage.[5] Treatment must be instituted within a few days of the onset. Six successive cases, treated early, followed courses much more favorable than would otherwise have been expected. The rationale of treatment is that cortisone reduces the swelling of the facial nerve or geniculate ganglion lying against it in the bony canal within the temporal bone. Neuralgia following herpes zoster has shown no improvement after ACTH or cortisone therapy. There is reason to hope that if such treatment is given early in the course of herpes zoster, post-herpetic neuralgia, which is so disabling in older individuals, might be averted.

The response of patients with trigeminal neuralgia (true tic douloureux) to 1,000 microgram daily doses of vitamin B_{12} administered subcutaneously has been notable enough to make it well worth a trial. Some patients with this condition respond well to oral doses of nicotinic acid sufficient to cause flushing and tingling of the skin (100 to 500 mg.). These two types of medical treatment have lessened the number of cases requiring alcohol injection or posterior root section. Unfortunately, the response of atypical facial neuralgias to either form of medical treatment (or to surgical treatment) is poor.

There is probably reason to be hopeful that the annual scourge of acute anterior poliomyelitis will be mitigated by the use of gamma globulin and vaccination.

There has been progress in the treatment of hydrocephalic children, but the outlook must be guarded. Cases first must be classified as carefully as possible. If the aqueduct of Sylvius is blocked, a tube may be placed connecting one lateral ventricle with the cisterna magna. In communicating hydrocephalus, the lumbar subarachnoid space may be connected to the peritoneal cavity or to one ureter after nephrectomy. In other instances, connection between the lateral ventricle and peritoneal cavity or ureter is elected. The growth factor will necessitate tube-lengthening procedures in the longer anastomotic tubes. Ureteral drainage appears to be the most satisfactory over a period of time. However, it has the disadvantages of sacrifice of one kidney, infections ascending to the meninges, and electrolyte loss, which is often critical in young children, by the free passage of cerebrospinal fluid into the bladder. Subdural accumulations of fluid, easily evacuated or drained, may be only one phase of a complex picture. Spontaneous arrest or unlearned factors may be the essential features leading to recoveries which are attributed to meddlesome procedures that have been performed. The extent of the problem is revealed in a recent article reporting 3 cases of hydrocephalic children who underwent a total of 16 operations with dubious results.[3]

I would like to emphasize tracheotomy, a procedure of great value and little risk which has demonstrated its increasing importance in the treatment of patients with obstruction of the airway, paralysis of the respiratory muscles, or aspiration complications affecting the bronchial tree. In patients with head injuries, brain tumors or abscesses, cerebral vascular accidents, bulbar poliomyelitis, ascending paralysis, or tetanus, tracheotomy is often life-saving. The need for tracheotomy should be anticipated hours before it becomes an immediate, urgent necessity. Local anesthesia is satisfactory. Proper instruments and cannulas are essential. Hemostasis must be complete and the cannula must be properly placed. Adequate suctioning of the cannula and upper respiratory tract must follow tracheotomy to obtain the full value of its use. Certainly, tracheotomy is often an essential part of an all out effort to enable a critically ill patient to survive.

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SOME COMPLICATIONS OF ANTIBIOTIC THERAPY

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THE past decade has witnessed dramatic changes in therapeutics directed against diseases caused by bacteria and rickettsiae. These have followed the isolation and purification of the many presently and widely employed antimicrobial agents.

Prior to the advent of penicillin, pneumococcal pneumonia, acute mastoiditis, syphilis, and the like were seen and treated in large numbers. Now they are seen less frequently, if at all. Pneumococcal pneumonia was once the "captain of death" with a mortality rate of 30 per cent. This rate has fallen below 5 per cent. Acute mastoiditis is now only a medical curiosity. Large clinics and hospitals have difficulty finding even occasional patients with primary and latent syphilis for teaching purposes. The same can be said for many other infectious diseases.

Along with this fall in frequency of important infectious diseases, there is an associated widespread use of antimicrobial agents. More than one-half of all prescriptions written are for antibiotics of various forms. Furthermore, the search for new products and for an understanding of the mechanism of action of these agents continues unabated.

While many problems in the field of infectious diseases have been resolved, the widespread use of antibiotics has created new and perplexing ones. Among these are the side reactions or untoward effects, which may be allergic, toxic, or related to a specific biologic action of one or more of these agents.

The list of undesirable effects actually observed and attributed to antibiotics is long and not at all consistent for the entire group of antimicrobial agents. Penicillin usually provokes a cutaneous allergic or an immunological reaction while the untoward effects of the broad-spectrum antibiotics are rarely evidenced by cutaneous manifestations. Therefore, for convenience, the complications of the antibiotics are discussed in relation to various organ systems which may be affected.

CUTANEOUS MANIFESTATIONS

Systemic administration of antibiotics provokes in the skin a wide variety of reactions. Most of these probably are due to sensitization and often are accompanied by pruritus and fever. Such lesions frequently appearing during or after therapy are transient and disappear. They may increase in severity and may result in serious consequences if therapy is continued.

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Penicillin is capable of causing the widest range of sensitivity and immunological reactions from a mild drug fever or a transient rash to exfoliative dermatitis and acute anaphylaxis. The cutaneous sensitivity eruptions of the mild and moderately severe type are frequently observed; fortunately, exfoliative dermatitis appears infrequently. Other reactions of hypersensitivity and immunological change include angioneurotic edema, serum sickness, and acute anaphylaxis. The severe anaphylactic reaction following penicillin does not occur unless the patient has been previously sensitized to this antibiotic. Use of penicillin in minor respiratory infection should be avoided in order to prevent hypersensitization. Presently penicillin is the most frequent single cause of this dangerous complication. The frequency of anaphylaxis is much higher than is being reported.

Contact dermatitis has been observed with many antimicrobial agents, especially penicillin and streptomycin. Persons who handle these agents but who have not been previously sensitized to them may have a dermatitis of the hands and face. This is usually accompanied by edema and vesiculation or eczema. It has been noted that the highest frequency of local and systemic sensitization occurs when these antibiotics are applied locally to the skin in ointments or oily suspensions. In any clinical situation the local application of these antibiotics in this manner should be considered carefully in order to avoid sensitization to future parenteral therapy.

Sensitization to the sulfonamides and penicillin has been suggested as one of the cardinal reasons for the evident increase in the diagnosis of periarteritis nodosa and acute disseminated lupus erythematosus. These diseases long have been suspected examples of severe diffuse sensitization reactions of the tissues to certain drugs, and the sulfonamides and penicillin are receiving increasing scrutiny as possible causes of some of the so-called acute collagen diseases.

ORAL LESIONS

Among the untoward reactions to the antibacterial agents, thirty-three different oral manifestations have been reported.[4] These are described as ulcerative or vesicular stomatitis and usually are provoked by the broad-spectrum antibiotics as follows: oxytetracycline (Terramycin), chlortetracycline (Aureomycin), tetracycline (Achromycin), and chloramphenicol. The chief symptoms are burning, dryness, soreness, and itching of the mouth and tongue. Examination reveals red and inflamed buccal mucous membranes, with or

without vesicles. The tongue may be red, smooth and shiny, swollen, furred, or denuded. Angular stomatitis (cheilosis) has been ascribed to riboflavin deficiency caused by broad-spectrum antibiotic administration. Yet the parenteral administration of massive doses of this vitamin with others of the B complex has usually failed to cure the lesion so long as the specific therapy was continued.

Distressing oral and gastrointestinal tract reactions are observed with greater frequency following the use of lozenges and troches than following oral or parenteral therapy. There may be some question as to whether treatment with lozenges and troches should be recommended for any purpose. This question is because of the frequency of these oral lesions, the danger of systemic sensitization, and the serious doubt that the antibiotic content in lozenges and troches is sufficient to be effective.

GASTROINTESTINAL DISTURBANCES

The broad-spectrum antibiotics administered orally often are followed by nausea, with or without vomiting, and by diarrhea of varying severity. These usually result from the direct irritating effect these agents have upon the gastrointestinal tract.

Severe diarrhea may present a difficult problem in management. Frequent liquid stools containing mucus and pus and often associated with high fever, weakness, and at times prostration upset the management of any infectious disease. Some cases of diarrhea are caused by coagulase-positive and hemolytic strains of Micrococcus pyogenes var. aureus (Staphylococcus aureus). This entirely new disease entity appeared following the introduction of broad-spectrum antibiotics. When these organisms appear in the stool in pure culture, they probably come from the upper respiratory tract and represent acute staphylococcal enteritis.

Acute colitis or chronic colitis, with the bowel flora consisting exclusively of Proteus, Pseudomonas, Monilia, and other less common organisms, have been recorded following the administration of the broad-spectrum antibiotics. These often resist the reestablishment of the normal bowel flora, even though the antibiotics are discontinued.

Acute monilial stomatitis, pharyngitis, vaginitis, and proctitis may accompany the administration of some of the antibiotics. More severe instances have resulted when these were administered over long periods or to debilitated patients.

Recently Reiner and his associates[5] presented evidence that Aureomycin is responsible for pseudomembranous colitis. Their studies of 49 necropsies indicated that 7 patients died of this specific condition. In many others there was microscopic evidence of the hyperproduction of tenacious mucus in the colon. In no instance could a specific enteric pathogen be cultured from the feces. Kleckner[3] and his coworkers reviewed the incidence of pseudomembranous colitis in a large clinic during the past decade. Since the widespread use of the broad-spectrum antibiotics, there has not been an associated increase in the frequency of this condition. Therefore, the possible relationship between the broad-spectrum antibiotics and pseudomembranous colitis remains undetermined.

EFFECT ON BLOOD FORMING ORGANS

The most serious hematologic reaction is the development of hypoplastic or aplastic anemia. This has occurred primarily in patients who have received repeated and prolonged courses of chloramphenicol. A number of deaths have resulted from this type of anemia, often caused by chloramphenicol used in the treatment of relatively trivial conditions. The bone marrow disclosed hypoplasia of all the marrow elements, and there was a reduction in the red blood cells, polymorphonuclear granulocytes, and platelets in the peripheral blood. The immediate cause of death has usually been hemorrhage, gastrointestinal or intracranial.

In my opinion chloramphenicol has been implicated severely and perhaps unnecessarily as a cause of hypoplastic anemia. The number of proven cases of this blood disease is small and not impressive as compared to the frequency of its successful use in therapy, especially where its employment is strongly indicated. The advantages of this antibiotic have been greatly weakened by the fear of this complication, and to avoid such complications, adequate blood studies should be made at regular intervals during treatment. Its casual use is not justifiable.

BIOLOGIC ACTION

Bacterial antagonism has been recognized since Pasteur first noted that a delicate balance existed in the environmental struggle between microorganisms. There is a constant struggle for survival exemplified best by the organisms in the soil. Bacteria, fungi, and Actinomyces become established when the environmental conditions (organic matter, acidity, physical and chemical properties, and the like) are most favorable to their growth. This established soil flora resists the entrance of other organisms by the production of toxic metabolites (antibiotics) which inhibit or destroy the invader before the new organism can become established. Many of the presently

employed antibiotics have been isolated and purified from these ubiquitous soil organisms.

Man also has an established flora of microorganisms in the skin, mouth, pharynx, vagina, and bowel. The administration of any antibiotic may upset this synergistic balance by depression or elimination of certain groups of organisms. Thus, agents that tend to inhibit gram-positive bacteria will allow the gram-negative microorganisms to flourish;[1] the opposite is also true. Under such circumstances the established flora becomes so altered that the microorganisms insensitive to the drug used become the predominant type. Such changes may not be significant, but occasionally a new or a superinfection results.[2] Whether these occur only because certain organisms normally present as saprophytes increase numerically to the extent that they may become invasive, whether there are tissue changes resulting from certain antibiotics that favor invasion of tissues by bacteria of low pathogenicity, or whether there is bacterial stimulation by the antibiotics remains obscure. It is significant, however, that a small percentage of patients treated by antimicrobial drugs become infected with different organisms from the one for which the therapy was originally given. Locally administered antibiotics, as in the eye or female genital tract, have a greater tendency to provoke new infections than when given for a specific systemic infection.

The organisms that have been observed to increase and occasionally to provoke a superinfection during antibiotic therapy are various species of Proteus, Pseudomonas aeruginosa, Micrococcus pyogenes var. aureus, Candida albicans, and Hemophilus influenzae (in children particularly).

Perhaps the most serious complication resulting from the widespread use of the antibiotics is the emergence of organisms that are becoming increasingly more resistant to most of the agents now commonly used. The great majority of important infectious agents have not become resistant. However, Micrococcus pyogenes var. aureus has developed an increase in resistance to all the antibiotics, including the most recent agent, erythromycin. I have observed this increase in resistance in a patient who was treated for a staphylococcal septicemia. This problem relates not only to the Staphylococci, for many other organisms previously considered less important infectious agents are capable of increasing their resistance to specific antimicrobial therapy. The number of antibiotics yet to be discovered may be limited, at which time the more adaptable pathogens may flourish at will and become capable of increasingly severe infections.

It is remarkable that none of the available antibiotics are free from the potentialities of untoward reactions. The most serious effects are the development of hypersensitivity, the increasing frequency of infections caused by antibiotic-resistant organisms, and, to a lesser extent, the development of superinfections by such resistant organisms.

The onset of untoward reactions to antibiotics during the course of therapy does not always warrant the prompt cessation of therapy. If the agent is the only effective one available for the purpose required, the type and severity of the reaction, its expected course, and the possibility of reducing its severity by proper management must all be weighed on the one hand against the hazard of the infection being treated. If there is a good prospect of favorably influencing that infection by continued therapy with this antibiotic, treatment may continue provided the drug hazard is not significant or can be managed and controlled.

SUMMARY

The untoward effects of antibiotics may appear insignificant compared to their great achievements toward conquering infectious diseases; yet the harmful sequelae of their use (particularly of their abuse) have not been given adequate prominence. The fact that harmful effects appear should not discourage any physician from their use when they are indicated. However, it should be remembered that when used casually for trivial or insignificant infections, severe and occasionally fatal complications may result. The employment of penicillin prophylactically in elective surgery and to treat noninfectious diseases should be strongly discouraged in order to reduce the hazard of hypersensitivity.

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Bulletin on Rheumatic Diseases

The first four volumes of *The Bulletin on Rheumatic Diseases* have been bound and are now available to physicians. *The Bulletin*, issued nine times a year, is available without charge to all physicians and medical students who request it. The bound volume which contains all issues for the past four years is available for $1 from the Arthritis and Rheumatism Foundation, 23 West 45th Street, New York 36.

PENICILLIN REACTIONS

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THE introduction of the use of penicillin in 1943 provided the medical profession with a powerful weapon against an innumerable group of infectious diseases. The end of the penicillin decade, in spite of the introduction of many other antibiotics, still found penicillin in wider use than ever before. However, because of this increased usage, more and more allergic reactions have been noted, and it has replaced foreign serums as the most common cause of anaphylactoid shock and anaphylactoid deaths. Our purpose is to discuss these reactions and measures that may reduce their incidence.

The overall incidence of penicillin reactions is not high. It has been estimated at from 2 to 20 per cent by various authors.[1, 2, 3, 8, 9] The incidence is much higher in persons who have a history of allergy, such as asthma, hay fever, atopic dermatitis, and urticaria. Almost every type of toxic drug reaction has been described, encompassing a range in severity from asymptomatic dermatographia and urticaria of transient type to serum sickness type of reactions, exfoliative dermatitis, and anaphylactoid shock.[8, 12, 17] The duration of the reactions may be from a few days up to a year. In general, the more severe the reaction, the less reversible it is, and the reactions of periarteritis nodosa and allergic granulomatosis may proceed for a long time after the initiating allergen, such as penicillin, has been eliminated. Severe anaphylactoid reactions are more common than the published reports would indicate, and we have been given informal reports by six colleagues of 12 anaphylactoid reactions in the past year locally. Welch[19] undertook a survey of 95 large general hospitals, totaling a capacity of 51,000 beds. Over a two year period 59 anaphylactoid reactions to penicillin were reported in this survey, with 19 deaths due to penicillin reactions. Although most of the deaths were due to injections of procaine penicillin, one death followed the oral tablet of dibenzylethylenediamine dipenicillin G (Bicillin). Welch also investigated 25 cases of anaphylactoid reactions to penathamate (Neo-Penil), with 5 deaths. A history of asthma and other allergies was present in 26 of the total group of 84 patients. Two anaphylactoid deaths will be reported in this paper.

The following is a classification of penicillin reactions in order of increasing severity and rarity:

1. Dermatographia
2. Toxic erythemas (morbilliform, scarlatiniform, and so forth)
3. Vesicular dyshidrotic reaction
4. Urticaria
5. Erythema nodosum and erythema multiforme
6. "Serum-sickness" reaction
7. Bullous or pemphigoid reaction
8. Hemorrhagic reaction
9. Purpura and agranulocytosis
10. Periarteritis nodosa
11. Exfoliative dermatitis
12. Allergic granulomatosis
13. Anaphylactoid reaction.

This is admittedly only a partial list of the most common syndromes, and almost twenty other syndromes have been reported.[1, 2, 3, 8]

In all the above reactions the primary shock organ has been the vascular apparatus, in various degrees of severity. Thus in dermatographia exudation of water and electrolytes and probably some plasma occurs after only minor injury to the vessels.

In urticaria, plasma protein, water, and electrolytes pass out of the vessels spontaneously. In erythema multiforme and erythema nodosum the formed elements of the blood leave the vessels into the surrounding tissue, both the red blood cells and white blood cells. In purpura, which may occur with or without depression of the blood platelets, plasma and red blood cells enter the interstitial spaces. In periarteritis nodosa the damage to the blood vessels progresses to a stage of necrotizing arteritis, while in allergic granulomatosis the change is a granulomatous perivascular inflammatory reaction. In anaphylactoid shock, in addition to the smooth muscle of the vessels, the smooth muscle of the bronchioles and probably also the heart muscle are involved in an almost instantaneous reaction. The latter responses either are due to a direct antigen-antibody reaction in the tissue involved or may be secondary to a massive release of a histamine-like substance.

The treatment of these reactions also varies with the severity of the vascular reaction. Thus dermatographia may require no therapy or may respond to antihistamines. Mild urticaria often may be suppressed with the antihistamines. The more severe reactions are usually best treated with ACTH or corti-

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The majority of the case material was obtained from the Dermatology Service of the United States Air Force Base Hospital, Randolph Field, Col. Carl B. Stilson, USAF (MC), Commanding Officer.

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costeroids[5] and are usually very resistant to antihistamine therapy. Anaphylactoid shock may require intravenous epinephrine, intravenous aminophylline to release bronchiolar constriction, and intravenous antihistamines. If time permits, ACTH or cortisone is given, and shock combated with plasma and oxygen therapy.[4, 8] In fatal reactions, actually little time is available, since Collins-Williams[2] in analyzing 16 fatal reactions found death occurred in from five seconds to two and one-half hours, with 10 dying in less than five minutes.

STUDY OF 33 CASES

We have studied in detail cases of penicillin reactions severe enough to warrant hospitalization. More hospital days were spent in treating this group than any other single dermatologic disease. With the exception of one dyshidrotic reaction, all of the cases belonged to the "serum sickness" type of reaction. Most of them had failed to respond to initial medication with various antihistamines. In addition to urticarial lesions of varying size, most of the patients also had swelling of the eyelids, hands, feet, knees, and elbows, with moderate arthralgia, fever, and elevation of the sedimentation rate. One case had hemorrhagic lesions, 1 had bullae, and 1 had electrocardiogram changes with incomplete bundle branch block. Albuminuria was noted in 1 case, and no L.E.-like phenomenon was found in the serum in 10 cases in which the test was performed.

Initial therapy included a vast variety of drugs, including Histadyl, Benadryl, Chlortrimeton, Pyribenzamine, and other antihistamines both orally and intravenously; Adrenalin, sodium salicylate, Pabalate, ephedrine, intravenous procaine, intravenous calcium gluconate, and intravenous Decholin; and sedation with barbiturates (Seconal, Nembutal, and phenobarbital) and analgesics (morphine and Demerol). Of this group 18 cases were satisfactorily relieved with one of the above medications. However, 15 patients continued with severe reactions with little or no response to therapy over a period of two to seven days. Fourteen of these severe cases responded promptly and dramatically to oral cortisone therapy with complete suppression of symptoms and lesions in forty-eight hours or less. One case was treated with ACTH with similar satisfactory results. The average length of therapy with cortisone was five days, with a variation of from two to seven days. Only sufficient cortisone to suppress the symptoms was given, usually not more than 200 mg. the first day, with rapid reduction as improvement occurred. No adverse reactions of any kind were noted to this short course of cortisone therapy. However, we should emphasize these were mostly healthy young men who were not known to have peptic ulcer, tuberculosis, diabetes, or psychotic tendencies.

In this series no recurrences of urticaria were noted. This is not the universal experience, however, as I have observed some cases in private practice in which recurrent reactions have occurred over as long a period as six months, responding only temporarily to corticosteroid therapy. The definite impression is gained, however, that early treatment of severe reactions with ACTH or cortisone not only gives prompt relief of all symptoms, but reduces the incidence of prolonged resistant reactions. As a result of this experience, it is our present policy to initiate cortisteroid therapy in all severe penicillin reactions from the onset, with the aim of both cutting short the reaction and reducing the duration of the reaction and hospitalization.

The indications for the use of penicillin in these cases was tabulated (table 1) and 25 different conditions were encountered. Diseases of the throat and respiratory system predominated. The validity of the indication was impossible to evaluate.

TABLE 1.—*Diagnoses Given as Indications for Penicillin Therapy.*

Diagnosis	No. Cases	Diagnosis	No. Cases
Upper respiratory infection	5	Urinary tract infection	1
Pharyngitis	2	Nonspecific urethritis	1
Acute sinusitis	1	Syphilis	1
Bronchitis	1	Impetigo	1
Acute tonsillitis	1	Carbuncle	1
Otitis media	4	Infected toe	1
Primary atypical pneumonia	1	Ingrown toenail	2
Granuloma of lung (preoperative)	1	Infection of gum	1
Orchitis	1	Sprained wrist	1
Mumps	1	Abrasion	1
Rectal abscess	1	Laceration	1
Anal fistula	1	Pain in side	1
		Infected tooth	1

In many of these cases the trouble with the penicillin reaction was more by far than the trouble with the primary disease.

CASE REPORTS

In addition to this group, I would like to report, with the permission of the physicians concerned, on 2 fatal anaphylactoid reactions which previously have been unreported.

CASE 1.—A 29 year old married woman complained of a cold of several days' duration and an injury to her left leg. She gave a past history of intractable asthma, for a year requiring Adrenalin constantly and almost biweekly visits to the doctor for relief of severe attacks with injection of intravenous aminophylline. She previously had had both penicillin and procaine with no reactions.

On examination the left leg presented a black and blue area 6 by 3 cm., with fluctuation in the center. The fluctuant area was incised and a small quantity of pus was evacuated. The patient was given procaine penicillin 300,000 units intramuscularly because of the abscess. Five minutes later the patient became cyanotic, tremulous, and speechless. She fell to the floor. Blood pressure and pulse could not be obtained, and she ceased breathing. Artificial respiration, oxygen, and intracardiac Adrenalin failed to resuscitate the patient. From the onset of symptoms of reaction to death was apparently only a matter of seconds.

CASE 2.—An infant, aged 6 weeks, had had a draining ear for four days. Examination revealed a profuse purulent discharge. No penicillin had been given previously. The family history was negative for allergies, and the mother had had penicillin without reaction. Procaine penicillin in aqueous suspension 300,000 units was given in the buttocks. No blood returned to the syringe on aspiration before injection. The baby cried for one minute, the breathing stopped, heart beats were not audible on auscultation, and the patient became cyanotic. Adrenalin and caffeine were injected. Within four minutes the chest was opened and cardiac massage started. Artificial respiration with oxygen was given for one and one-half hours. No resuscitation occurred. The father was a military medical technician and stated that he had observed two similar anaphylactoid deaths from penicillin while he was overseas.

Death was almost instantaneous in both cases, once the reaction started, and probably had occurred before treatment was started, prompt as it was. There was no evidence of intravascular injection. There is not absolute proof that penicillin and not procaine was the active antigen. However, the experience of Thomson[18] may be cited. A patient had a severe reaction to procaine penicillin from which he recovered. In the belief that the reaction had been caused by procaine and not penicillin, two months later the physician gave him an intramuscular injection of penicillin G. The patient was dead in fifteen minutes.

PREVENTION OF REACTIONS

Because of this increasing problem, various measures have been proposed to prevent reactions to penicillin. One obvious measure is not to give penicillin injections except for adequate indication. Certainly penicillin therapy has no place in the uncomplicated common cold and various other self-limited diseases on which penicillin has no direct effect. Because of the increased incidence and severity of reactions in persons who have allergies[2] such as hay fever, asthma, and atopic dermatitis, these persons probably are better treated with another antibiotic if possible. However, although the allergic reactions to other antibiotics are much less, they also have disadvantages, and each case must be individualized.

Another obvious preventive measure is a thorough history as to previous reactions on all patients given penicillin. Welch[19] found that in 84 cases of anaphylactoid reactions to penicillin, 16 had a history of penicillin sensitivity. Scratch tests have been proposed to predict sensitivities. However, Collins-Williams[2] found that out of 7 adults known to be penicillin sensitive, only 3 reacted to scratch and intracutaneous tests. At present they cannot be regarded as either practical or accurate and are not generally used. Kern and Wimberly[8] have suggested that the injection be made far enough down the arm or in the fascia lata, so that a tourniquet may be used to delay absorption in case of a severe reaction.

Various attempts have been made to modify penicillin to make the drug less active antigenically. White[20] found that oral penicillin tablets given as venereal prophylaxis were associated with a very low rate of allergic reaction. Out of 45,000 tablets of 500,000 units each, only 3 mild reactions occurred. The Navy has found few reactions to oral penicillin, and uses oral tablets for venereal prophylaxis in areas of high incidence. Various studies in oral penicillin for prophylaxis of rheumatic fever have indicated low reaction rates. For general use in nonfulminating infections, therefore, there is much to be said for the use of oral rather than parenteral penicillin in the prevention of allergic reactions. Penicillin O has been proposed because some penicillin reactors can tolerate this modified penicillin. However, Lyons[10] has stated that in 8 patients known to be sensitive to penicillin G, reactions were obtained in 4 with penicillin O also. Combination of the penicillin with an injectable antihistamine has been investigated. Jenkins[6] reported no reactions from 590 injections in 111 patients when penicillin 300,000 units was given with 10 mg. injectable Chlortrimeton in the same syringe. Simon[16] reported only 3 mild reactions when penicillin was given with pyribenzamine injectable in the same syringe in 1,237 patients, a reaction rate of 0.24 per cent. It would seem then that reactions could be diminished if oral penicillin were given more frequently and if those patients requiring immediate high levels of penicillin were given the drug in combination with an injectable antihistamine in the same syringe. In patients with an allergic tendency, it would be better to use one of the other antibiotics if possible.

To be prepared as fully as possible for any anaphylactoid reaction, an emergency kit should be kept close at hand at all times. This should include a syringe, needle, tourniquet, injectable epinephrine, aminophylline, an antihistamine, and cortisone or ACTH.[8]

The situation has been nicely summarized by Smith and Walker[17] in "Penicillin Decade." They stated that "by desensitization and the considered use of anti-histaminics or other detoxifying agents, surely the great number of reactions recorded in these pages need not be found in the literature of penicillin's second decade. While the actual toxicity of penicillin is almost negligible, its ability to sensitize and to cause serious and even fatal accidents should not be minimized. A grave responsibility rests upon the shoulders of the physician for its wise application in clinical practice."

SUMMARY

The increasing importance of allergic reactions to penicillin, in particular the "serum sickness—like re-

actions" and anaphylactoid reactions are discussed.

Features of 33 penicillin reactions requiring hospitalization are discussed, with favorable emphasis on the early use of ACTH and cortisone in therapy.

Two fatal anaphylactoid deaths due to penicillin are reported.

Preventive measures are presented, including the recommendation for avoidance of penicillin in allergic persons if possible, the increased use of oral penicillin, and the combination of penicillin with injectable antihistamine for parenteral use.

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ABSTRACT OF DISCUSSION

LT. COL. MYLES P. MOURSUND, USA (MC), Fort Sam Houston: I have not seen a case of anaphylactoid shock from penicillin, but probably this is because I have become increasingly reticent and cautious in the administration of penicillin in recent years as a result of seeing innumerable cases of severe urticaria and angioneurotic edema from penicillin in the years from 1949 to 1951. Of course reactions to penicillin varying in degree are still occurring every day in the week, but fortunately the majority of them are mild. However, even a partial review of the literature and conversations on the subject have amazed me as to the number of reported as well as unreported instances of anaphylactoid shock and deaths resulting from penicillin injections. It certainly corroborates the statement by Dr. Strauch and his associates that this type of severe and even fatal reaction to penicillin is definitely on the increase and should be kept in mind when one considers the use of penicillin.

The value and use of penicillin when properly indicated cannot be denied, but the essayists bring out an especially good point, that with reckless abandon and no thought of the possible consequences, penicillin has been given and no doubt still is being given for such things as infection of the upper respiratory tract, sprained wrist, pain in the side, and abrasions. I tried, unsuccessfully I am sure, to convince one of our local general practitioners of the potential danger of indiscriminate use of penicillin, but he insisted it had become "routine treatment for colds and the flu." The large majority of the patients I have seen with a penicillin reaction have received their penicillin for a "cold" or some similar minor condition.

In addition to deciding that the patient has a definite indication for use of penicillin, one should take time to question him about allergy (asthma or hay fever in particular) and about previous penicillin therapy with any possible untoward effects from it. Then if penicillin is given, one should observe the patient closely following each injection for early evidence of anaphylactoid shock, which usually occurs within five to fifteen minutes after the injection. All of this is obviously time consuming but appears necessary in the present day use of penicillin.

Sterling* listed five cardinal symptoms which forewarn of anaphylactoid shock and stated that if any one or several of these symptoms appear, no further penicillin should be given. These symptoms are (1) syncope, mild to severe, at the time of injection, or a feeling of faintness recurring periodically for the following three or four hours; (2) sensation of burning or heat throughout the body, especially in the throat, palms, and soles (similar to sensation during intravenous calcium administration); (3) local or generalized pruritus within a few hours after the injection; (4) choking sensation in the throat; and (5) severe paroxysmal pain varying in location such as precordial, epigastric, or diaphragmatic. In all of the reports of anaphylactoid reaction to penicillin that I reviewed, one or more of these symptoms, especially the severe pain, usually precordial, were initial and more or less immediate symptoms of the reaction.

It is unfortunate that to date we have no simple means of determining penicillin sensitivity. Kern and Wimberley[8] have been strong advocates of skin tests, and Feinberg and others[4] stated, "It is practically a certainty that a skin test will be positive in all those persons who react anaphylactically to penicillin." Other observers have disagreed strongly with the value or efficacy of this test. For example, Capt. Bruno Eisen, resident in internal medicine, and Lt. Col. Arthur J. Berger, chief of the Allergy Service, Brooke Army Hospital, Fort Sam Houston, recently have skin tested (patch, scratch, and intradermal) more than 1,000 persons, including at least 100 known sensitive persons and have yet to see a positive test. Also such skin testing is not without danger. One of the persons tested had an immediate anaphylactoid reaction and required prompt treatment to prevent serious results. Her skin test

**Sterling, A.: Anaphylactic Shock Following Penicillin Therapy in Bronchial Asthma, J. Allergy 24:542-546 (Nov.) 1953.*

was negative. A complete summary of Eisen and Berger's findings will be published in the near future. Other reports of anaphylactoid reaction from penicillin skin tests are to be found in the literature.

Dr. Strauch and his co-workers advocate the use of oral penicillin, and a report by White[30] seems to substantiate the fact that few reactions occur from this method of therapy. However, severe and near fatal reactions have been described from intranasal instillation, aerosol, penicillin troches, and oral administration in other reports.

ACTH and cortisone definitely have proved their worth as adjuncts in the treatment of penicillin or other allergic reactions. However, a word of caution might well be reemphasized. It is a recognized fact that patients who have had steroid therapy within six months or perhaps even a year, and particularly those who have been receiving prolonged maintenance steroid therapy, may die suddenly from acute adrenal insufficiency if subjected to stress such as an injury or an operation unless cortisone is given to them immediately in adequate dosage (30 to 50 cc. aqueous adrenal cortex extract intravenously for immediate adrenal cortical support and 70 to 140 mg. of hydrocortisone per day or 100 to 200 mg. of cortisone per day orally depending on dosage prior to surgery or accident). Drug manufacturers (Upjohn for one) are now furnishing cards with instructions concerning this emergency for physicians to give to patients who have had or currently are receiving steroid therapy.

As for me, except in the treatment of syphilis and gonorrhea or when sensitivity tests reveal that penicillin is the only drug to which the organisms are susceptible, I am relying on the use of Terramycin, Aureomycin, Achromycin, or Erythromycin whenever I think antibiotic therapy is indicated. But who knows how soon we will begin to see or hear of anaphylactoid reactions and deaths from these also?

HYDROCORTISONE OINTMENT IN THE TREATMENT OF DERMATOLOGIC DISORDERS

J. FRED MULLINS, M. D., and JOHN H. HICKS, M. D.,*
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SINCE the recognition of the anti-inflammatory action of the steroids, many dermatologic disorders have been treated with these compounds. Cortisone acetate was found to be relatively ineffective when used locally on the skin. However, hydrocortisone acetate (compound F) has definitely been assigned a role in the treatment of certain skin diseases. Sulzberger[2, 3, 4, 5] has reported the beneficial effects of both hydrocortisone free alcohol and hydrocortisone acetate in a series of 252 cases. The purpose of this paper is to evaluate the merits of topical hydrocortisone in 100 selected cases of dermatoses and to compare the response of these cases to 1 per cent (10 mg. per gram) and 2.5 per cent (25 mg. per gram) hydrocortisone acetate. These concentrations were incorporated into a vanishing cream type base, which we believe is of considerable significance in the therapeutic effect derived from the preparation.

METHOD

Where possible, cases were selected with symmetrical involvement in order that the ointment base could be utilized on one side and the specific preparation on the other. Also an attempt was made to compare the 1 per cent with the 2.5 per cent preparation on several of the same patients. The majority of the cases presented an erythematous weeping dermatitis; however, there were some cases of idiopathic pruritus of the anogenital region with no inflammatory involvement. Initially, the patient was requested to apply a thin film of the ointment four times daily; after definite improvement, the frequency of application was decreased. The nonhospitalized patients were observed at three to four day intervals.

RESULTS

Although the patients on whom we used the hydrocortisone free alcohol are not reported here, the results were not significantly different from those shown in tables 1 and 2.

There was little difference in the 1 per cent (table 1) and 2.5 per cent hydrocortisone acetate (table 2) in regard to the improvement noted in pruritus of the anogenital region. The criteria for improvement in these cases, as well as the subsequent ones, were less weeping, erythema, scaling, and pruritus. The duration of treatment in these cases was somewhat longer when the 1 per cent concentration was utilized; however, in all cases there was marked relief of pruritus within twenty-four to forty-eight hours and objective improvement within three days.

In the 10 cases of atopic dermatitis, the improvement was extremely satisfactory. Perhaps this is related to the duration of the disease as the majority of these cases were in infants and small children. In

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From the Department of Dermatology, University of Texas Medical Branch.
The hydrocortisone acetate used in this study was supplied by the Pfizer Company under the trade name of Cortril Acetate.
**Chairman and Director, Department of Dermatology, University of Texas Medical Branch.*

the cases of lichen simplex chronicus, there was significant improvement in the majority of the patients, especially in the alleviation of itching. However, it was found that the objective response to therapy was much slower than in cases of the remaining diseases and the duration of therapy was usually longer. A number of these patients are still under treatment and are showing progressive improvement.

In the 3 cases of herpes simplex, the response was favorable within a twenty-four hour period. However, the 1 case of herpes zoster was not benefited by this therapy. Localized neurodermatitis, particularly of the eyelid, responded exceedingly well to each concentration of the ointment. Eczematous contact dermatitis responded favorably, as did many cases of eczematous dermatitis associated with vesicular dyshidrosis.

In almost all of these patients there was significant relief of pruritus within forty-eight hours, and the conditions had shown marked clinical improvement by four to six days. The therapy as shown in the tables was carried out for longer periods of time in order not to allow an exacerbation of the condition. In many of the cases of pruritus of the eyelids, pruritus of the anogenital region, and lichen simplex chronicus, it was noted that if therapy was discontinued at the end of six or seven days, frequently there was a recurrence of the disease within three to four days. Many of the patients with pruritus of the anogenital region had been confronted with the disease for one to fifteen years. The therapeutic response seemed to parallel exactly the amount of lichenification present. This was particularly true of lichen simplex chronicus.

In none of these cases was there evidence of primary irritation, sensitization, or untoward systemic absorption effects. However, other investigators have reported distant beneficial effects from treatment of an unrelated site.[3] Infectious eczematoid dermatitis of the ears responded favorably to hydrocortisone acetate, but frequently it was necessary to eradicate the predominantly gram-negative organisms with antibiotic therapy before the administration of hydrocortisone ointment. There is no contraindication to the utilization of hydrocortisone ointment and various antibiotic preparations concomitantly or in combination.[1]

We had an opportunity to use the hydrocortisone acetate in a petrolatum-lanolin type base on approximately 20 patients, but it was believed that the results were less satisfactory, and the greasy base was not as well accepted by the patient as the vanishing cream type. This was particularly true of the thin skinned sites and the mucous membranes.

SUMMARY AND CONCLUSIONS

The results of therapy, following the use of hydrocortisone acetate ointment, in 100 selected, well controlled cases are reported.

Hydrocortisone acetate, 2.5 per cent, was somewhat superior to hydrocortisone acetate, 1 per cent. Each of these concentrations was in a vanishing cream type base.

If a good therapeutic response is to be expected from these preparations, it will be noted within six days. Frequently it is observed within the first twenty-four hours.

TABLE 1.—*Results of Treatment of Various Dermatoses with 1 Per Cent Hydrocortisone Acetate Ointment.*

Diagnosis	No. Cases	Average Duration of Treatment (Days)	Results: Marked Improvement	Moderate Improvement	Slight Improvement	No Improvement
Atopic dermatitis	8	15	3	3	2	
Contact dermatitis	7	11	5	2		
Pruritus ani, vulvae, and scroti	7	16	5	2		
Eczematous dermatitis	5	10	4	1		
Lichen simplex chronicus	3	8	1	1	1	
Localized (eyelid) neurodermatitis	2	8	2			
Infectious eczematoid dermatitis	1	30		1		
Pityriasis rosea-like eruption	1	9			1	
Roseola vaccinia	1	9	1			
Seborrheic dermatitis	1	16	1			
Totals	36		22	10	4	

TABLE 2.—*Results of Treatment of Various Dermatoses with 2.5 Per Cent Hydrocortisone Acetate Ointment.*

Diagnosis	No. Cases	Average Duration of Treatment (Days)	Results: Marked Improvement	Moderate Improvement	Slight Improvement	No Improvement
Contact dermatitis	11	7	7	2	1	1
Eczema nummulare	9	13	2	4	3	
Lichen simplex chronicus	7	12	3	1	3	
Vesicular dyshidrosis with eczematization	7	14	1	3	3	
Pruritus ani, vulvae, and scroti	6	10	5	1		
Eczematous dermatitis	6	11	3	2		1
Localized (eyelids) neurodermatitis	5	12	3	2		
Infectious eczematoid dermatitis (ears)	3	21	2	1		
Herpes simplex	3	6	3			
Atopic dermatitis	2	8	2			
Seborrheic dermatitis	2	7	1	1		
Herpes zoster	1	4				1
Monilial folliculitis	1	4	1			
Pyogenic granuloma	1	7			1	
Totals	64		33	17	11	3

These agents appear to be much more effective at the sites of the body where the skin is thin, such as the eyelids, the nipple, and the axillary region, as well as the mucous membranes of the anogenital region and lips. This is probably due to the fact that there is better "absorption" at these particular areas.

Hydrocortisone acetate ointment commands a distinct role in the treatment of certain specific dermatologic diseases. It would seem to be the treatment of choice in atopic dermatitis of infancy, neurodermatitis of the eyelids, and essential pruritus of the anogenital region. The ultimate value of this preparation in conjunction with other well accepted therapeutic modalities is yet undetermined.

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ABSTRACT OF DISCUSSION

DR. C. F. LEHMANN, San Antonio: My experience with this product has been limited as compared with other observers, and I have not become as enthusiastic about it. Possibly by further use of it my results will improve. The conditions which seem to respond best are atopic eczema, anogenital pruritus, and localized neurodermatitis. I concur in the reports that it is of value in atopic eczema, but in my experience the benefit in anogenital pruritus and localized neurodermatitis (such as on the nape of the neck or eyelids) has been disappointing. The incidence of improvement or relief of pruritus in these two latter conditions has been roughly 10 per cent.

Possibly three factors explain why I have not seen a high percentage of good results in my experiences with hydrocortisone ointment. First, I prescribed the ointment without in any way using the power of suggestion. It was just another prescription, not one that gave a lot of relief. (There was one exception. A stingy patient who could well afford to buy sufficient quantities of the ointment disappointed me after a two weeks' trial. He stated that it did not give his scrotal pruritus as much relief as carbolated Vaseline. In this case, I had lauded the product to the skies, hoping to impress upon him in some way the wonderful virtues of this new ointment.) I do not believe that many of us need go back very far long Memory's Lane to recall the value of suggestive psychotherapy in prescribing something new. I can recall the wonderfully high percentage of satisfactory antipruritic results from Thephorin Ointment when I first used it.

But I do not believe the poor responses to hydrocortisone ointment have been due to lack of salesmanship. I am more inclined to believe that it is due to paucity of its use. Until recently, I have instructed patients to massage it into the skin twice a day. (I note, however, that Rein's reports* are based on twice a day instructions when using it on large areas.) Massaging the ointment into the skin four times a day, as Dr. Mullins, Dr. Hicks, and others have have advised, is a fairer test of the product. The paucity in its use is no doubt also explained by the expense of the product. At the price charged for a 5 Gm. tube, we could not have expected many patients to agree to using enough of the ointment nor continuing its use for long. With the recent drop in price, I would expect better results if paucity of usage explains why I have not been enthusiastic about this product. I have considered having an ointment compounded by the pharmacist. If a patient can buy 20 Gm. now for $6, I hardly think that any pharmacist would compound the ointment from the hydrocortisone tablets for less.

It is gratifying to know from the presentation by Dr. Mullins and Dr. Hicks, as well as from other reports, that no case of sensitivity to hydrocortisone has been seen and also that no constitutional effect has been noticed from absorption of it through the epidermis. In this respect it promises to be a safe medicament.

Like every other new drug it is going to be applied to all sorts of conditions with and without any rationale. For instance, just a few days ago I saw a child with a wool irritation on a congenital keratosis pilaris (a mild ichthyosis) who had been using hydrocortisone ointment for three months without enough relief to justify the expense of the ointment. I predict that after another year or so we all will be better acquainted with its indications and limitations, and I anticipate that my enthusiasm will increase.

I do not mean to infer that I have not seen any good results from this preparation. I have seen it given a severe test, as in a case of long standing neurodermatitis on temple areas and upper eyelids, with a markedly lichenified skin. This case had received an array of various treatments. The itching was promptly relieved with hydrocortisone and the lichenification left after the rubbing and scratching stopped. However, from a limited experience I am not convinced that this ointment deserves the position of *sine qua non*. To justify such a position at the price of the ointment there should be 100 per cent marked improvement from its use. Until I am convinced that hydrocortisone ointment will give the patient an 80 per cent or better chance of marked, prompt benefit, in my hands it will be resorted to when other conventional medicaments have failed.

**Rein, C. R.: Present Status of Hydrocortisone Acetate Ointment in Dermatologic Therapy, Arch. Dermat. & Syph. 68:452-456 (Oct.) 1953; Report on Topical Hydrocortisone in Dermatologic Therapy, Merck Report 63:20-22 (April) 1954.*

Accidental Falls Fatality

Accidental falls take approximately as many lives each year in the United States as tuberculosis; falls rank second only to motor vehicles as a cause of accidental death, the Metropolitan Life Insurance Company statisticians report.

Of the approximately 21,000 fatal falls each year, about two-thirds take place in and around the home. The death rate from accidental falls is higher among males at ages under 75 and higher in females after that time. More than half of all fatal falls occur at 75 years of age and over, a big proportion occurring while the victims are walking about the house. Below the age of 15 years, falls from porches, roofs, windows, and trees account for most of the deaths. Falls on stairs account for nearly a fourth of the deaths in the 25-44 group and close to a third in the 45-74 range.

SCREENING METHODS IN HEMATOLOGY
A Comparative Study

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THE comparative inaccuracy of standard hematologic screening procedures has been well known for many years, yet clinicians and even some clinical pathologists have been reluctant to alter the time-honored methods used almost universally for admission hematologic studies. It was a realization of the fallacies of these procedures that prompted this investigation. Since many of the "normal values" in hematology are based on inherently inaccurate methods, we have directed our efforts toward study of the ease and simplicity and of the reproducibility of certain hematologic procedures rather than attempting to determine the degree of accuracy of each.

In a survey of admission hematology methods used in 21 hospitals throughout the state (table 1), it was found that in 13 of these, studies consisted of an erythrocyte count, leukocyte count, hemoglobin determination, and differential white cell count. A hematocrit determination was included as an additional procedure in 1 case. The erythrocyte count had been eliminated in 7 hospitals, being replaced by a hematocrit in 4 of these. In 1 hospital, no routine admission hematology work was done. Four pathologists indicated appreciable experience with photometric methods for erythrocyte counts; however, only one of these had had significant experience with the scatter photometric method. The direct erythrocyte count was considered to be an ideal screening procedure in only 7 instances, while the majority of pathologists preferred to substitute a hematocrit for the erythrocyte count. It immediately becomes apparent that not only is there a striking lack of uniformity of hematologic screening methods, but also an equally striking lack of uniformity of what various clinical pathologists consider to be ideal procedures for this purpose.

TABLE 1.—*Screening Methods in Hematology Used in 21 Texas Hospitals.*

Methods Currently in Use		
RBC, Hgb., WBC, and Diff.		13
(Photometric RBC	1)	
RBC, Hgb., WBC, Diff., and Hematocrit		1
Hgb., WBC, and Diff.		6
(Plus Hematocrit	2)	
(Plus Hematocrit and Sed. Rate	2)	
No admission hematology studies		1
		21
Methods Considered Ideal		
RBC, Hgb., WBC, and Diff.		4
RBC, Hgb., WBC, Diff., and Hematocrit		3
Hgb., WBC, and Diff.		4
Hgb., WBC, Diff., and Hematocrit		6
WBC, Diff., and Hematocrit		3
Hematocrit and Hgb.		1
		21
Experience with Photometric Erythrocyte Counts		4
Favorable	3	
Unfavorable	1	

The various procedures considered in this investigation were the erythrocyte count by both direct and scatter photometric methods; hemoglobin concentration by Leitz and Haemoscope* instruments; packed cell volume by Wintrobe and capillary methods; and whole blood specific gravity by the Barbour-Hamilton "falling drop" method.

ERYTHROCYTE COUNTS

During the past few years an increasing interest in the possibility of photoelectric determinations of erythrocyte counts has become manifest. The basic principles, clinical application, and limitations of this method were outlined by Blum[2, 3] in 1945, and since that time many additional papers have appeared on this subject.

The photoelectric method involves the principle of turbidimetry and basically measures the amount of parallel light rays transmitted through a suspension of erythrocytes, but does not compensate for the influence of the size and shape of cells on the transmitted light. A novel method to eliminate partially this effect was described in the German literature in 1951, and was appraised by Brackett, Mattern, and Olson[4] in 1953. The principles of the instrument

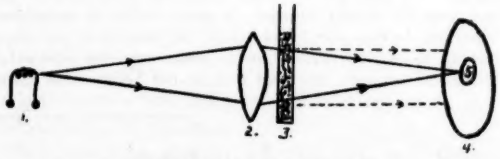

FIG. 1. Diagram showing the principle of the Haemoscope (scatterphotometer). A beam of light from the source (*1*) passes through the lens (*2*) and cuvette (*3*). The light rays are converged on the photoelectric cell (*4*) to the focal point (*5*); however, the photoelement has an aperture at that point so that no photoelectric current is produced by the focused image. Light striking the edges of the erythrocytes is diffracted from its original path to strike the tensitive portion of the element, and the current thus produced is measured.

Read before the Texas Society of Pathologists, San Antonio, May 3, 1954.

*Haemoscope Corporation, 230 Park Avenue, New York 17.

are quite simple even though the diffraction effect of anisocytosis and poikilocytosis on the light rays is poorly understood. The fundamental principle of the Haemoscope is based on measuring light diffraction as illustrated in figure 1.

The inherent errors of the direct erythrocyte counting method are well known and generally are considered to be as great as plus or minus 16 per cent.[1]

The results of a comparative study of erythrocyte counts done by direct and scatter photometric methods in 350 consecutive hospital admissions are shown in figure 2. It is apparent that most of the values fall within the normal range and that the majority of values obtained by the two methods are correlated within plus or minus 10 per cent. Although several low counts are represented in the scattergram, additional studies were made in the form of erythrocyte counts done on progressive saline dilutions of a single blood sample. The results shown in table 2 indicate satisfactory correlation, even in those bloods with especially low red cell counts. Comparable results were obtained on progressive concentrations of a single blood specimen.

TABLE 2.—*Comparison of Haemoscope and Direct Erythrocyte Counts on Progressive Saline Dilutions of a Single Blood Sample.*

Example	Haemoscope RBC Count (millions/cu. mm.)	Chamber RBC Count (millions/cu. mm.)
1	3.45	3.50
2	2.80	2.49
3	2.30	2.29
4	2.20	2.65
5	2.00	1.99
6	1.94	2.00
7	1.30	1.38

TABLE 3.—*Comparison of Haemoscope and Direct Erythrocyte Counts in Cases with Color Index 0.85 or Less and with Hemoglobin 11.0 Gm. per 100 cc. or Less.*

Case	Direct RBC (millions /cu. mm.)	Haemoscope RBC (millions /cu. mm.)	Variation of Haemoscope RBC from Direct RBC millions /cu. mm.	%	Color Index (Direct RBC)	Color Index (Haemoscope RBC)
8	3.87	3.9	+0.03	+ 0.8	0.85	0.85
9	3.96	3.9	—0.06	— 1.5	0.80	0.82
10	4.17	4.07	—0.10	— 2.5	0.81	0.83
11	3.91	3.23	—0.68	—18.0	0.80	0.95
12	4.22	4.10	—0.12	— 3.0	0.80	0.82
13	4.18	4.10	—0.08	— 2.0	0.85	0.85
14	4.06	3.34	—0.72	—18.0	0.65	0.76
15	3.99	3.33	—0.66	—16.0	0.85	0.98
16	3.92	3.82	—0.10	— 2.5	0.85	0.86
17	3.60	3.27	—0.33	—10.0	0.85	0.92
18	3.56	3.38	—0.18	— 5.0	0.83	0.86
19	3.41	3.25	—0.16	— 5.0	0.85	0.89
20	3.95	3.47	—0.48	—12.0	0.80	0.88
21	4.20	3.98	—0.22	— 5.0	0.84	0.86
			Average error: 7.2%			

Although numerous bloods showing a marked degree of microcytosis and macrocytosis were not available for this study, comparison of the two methods was made in 14 selected cases having a low color index (table 3). It is evident that in these cases values obtained by the photometric method are almost uniformly lower than those derived by the direct count with a maximum of 18 per cent deviation. Since the degree of error inherent in direct erythro-

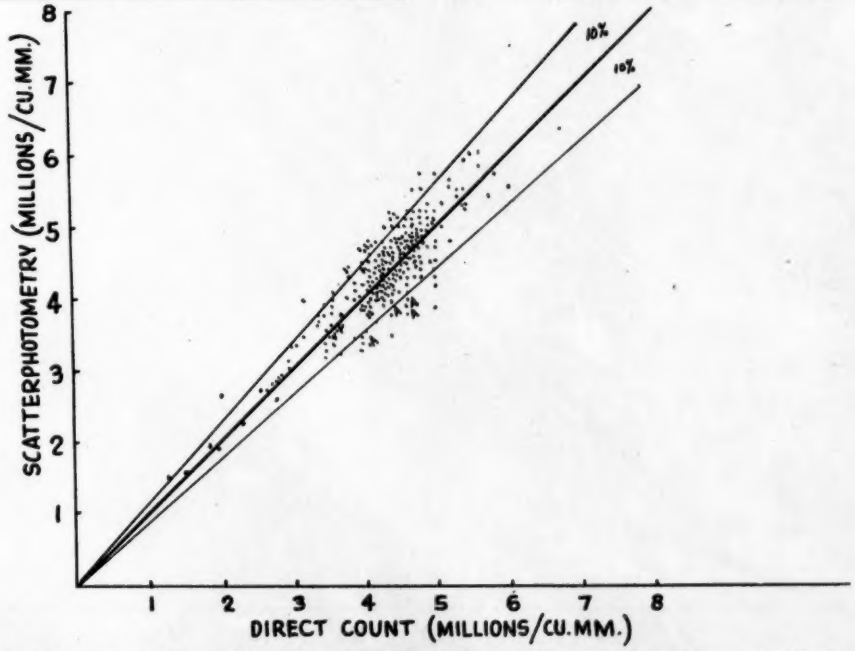

FIG. 2. A scattergram showing correlation between Haemoscope and direct erythrocyte counts in 350 consecutive hospital admissions. The points indicated by *A* represent cases in which marked anisocytosis was noted on examination of the stained smears.

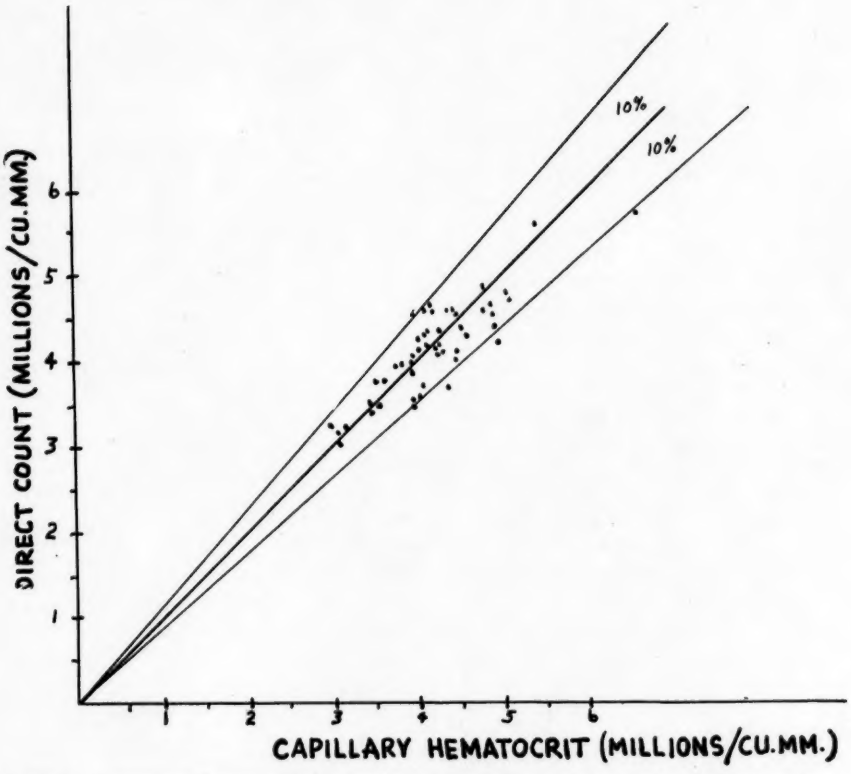

FIG. 3. A scattergram showing correlation between direct erythrocyte counts and erythrocyte estimations from capillary hematocrit determinations.

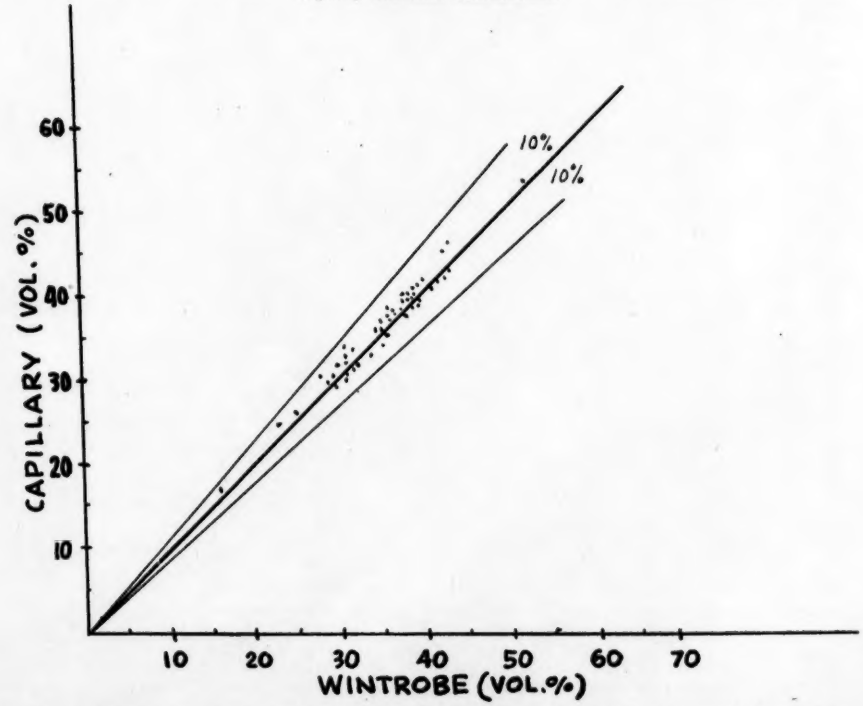

FIG. 4. A scattergram showing correlation between capillary and Wintrobe methods of hematocrit determination.

TABLE 4.—*Comparison of Time Factor of Erythrocyte Counts by Haemoscope and Direct Methods.*

No. Cases	Direct				Haemoscope			
	Dilute	Shake	Count	Total	Dilute	Calibrate	Count	Total
1	1 min. 3 sec.	2 min. 23 sec.	3 min.	6 min. 26 sec.	1 min. 27 sec.	1 min. 30 sec.	47 sec.	3 min. 44 sec.
80	1 hr. 24 min.	31 min. 40 sec.	4 hr.	5 hr. 26 min.	1 hr. 57 min.	1 min. 30 sec.	1 hr. 4 min.	3 hr. 3 min.

cyte counts may be as much as 16 per cent, however, the magnitude of this variation becomes less alarming. It will be noted also that the average variation between the two methods was only 7.2 per cent, a figure that certainly falls within accepted limits and indicates a certain degree of compensation by the instrument. Nevertheless, the fact that the Haemoscope values were lower than those obtained by the direct method indicates an incomplete compensation by the instrument for reduced cell size and hemoglobin content.

The time factor involved in erythrocyte counts is of importance, although certainly less important than the accuracy and reproducibility of the procedures. A comparison of the time involved in photometric and direct erythrocyte counting methods is shown in table 4. Although less than three minutes per count are saved by use of the photometric method, this represents a 44 per cent saving and amounts to approximately two and one-half technician hours per day in an average sized hospital laboratory. Technologists using the instrument were favorably impressed with its adaptability to routine hematologic work and with the ease and simplicity of its operation.

As direct erythrocyte counts, in addition to inherent inaccuracies, are time consuming and since so many clinicians are reluctant to accept hematocrit values in lieu of actual cell counts, an attempt was made to estimate red cell counts from capillary hematocrit determinations and to correlate the values obtained

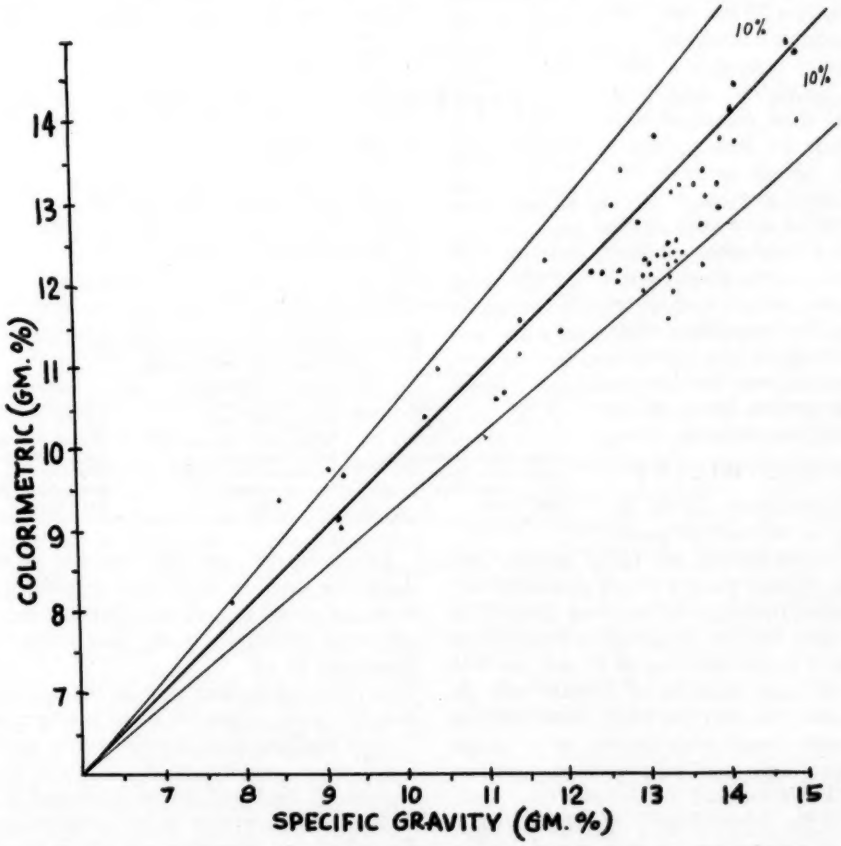

FIG. 5. A scattergram showing correlation between colorimetric (Leitz) and specific gravity (Barbour-Hamilton) hemoglobin determinations.

with those derived by the direct chamber method (fig. 3). It will be noted that nearly all of the values obtained by these methods showed a deviation of less than 10 per cent, indicating that an adequate estimation of the red cell count can be made, if desired, from the hematocrit. A comparison of results obtained by the Wintrobe and capillary methods of hematocrit determination indicates that estimation of the erythrocyte count by either method would be satisfactory as a routine screening procedure (fig. 4).

HEMOGLOBINOMETRY

In clinical hemoglobinometry, as in all other laboratory procedures, errors may be classified as instrumental and personal. The sources of instrumental errors are the colorimeter and the pipettes. The intrinsic error in well calibrated colorimeters is relatively small. The Sahli pipette, however, may be the source of large error as Sunderman has reported as much as minus 30 to plus 20 per cent error due to inaccurate calibration.[5]

Colorimetric hemoglobin determinations, using the Leitz-Rouy photometer, were compared with those done by the Barbour-Hamilton specific gravity method (fig. 5). It is noted that lower values were obtained in most cases by the colorimetric method, although most of the determinations showed a deviation of less than plus or minus 10 per cent. The hemoglobin values derived from whole blood specific gravity, however, were based on an arbitrary conversion factor which may not have been accurate.

REPRODUCIBILITY

In an attempt to evaluate the reproducibility of each of the procedures under consideration, six blood samples were subjected to repeated study by each procedure with determination of the range and standard deviation of the results (table 5). The direct chamber erythrocyte count showed a maximum range of 17 per cent with an average standard deviation of 169,000 cells per cubic millimeter. On the other hand, results obtained by the Wintrobe hematocrit showed only 1.8 per cent maximum range with an average standard deviation of 0.164 per cent.

Oxyhemoglobin determinations by the Leitz colorimeter showed a surprising failure of reproducibility, although pipettes were checked by the mercury-gravimetric method. Satisfactory hemoglobin reproducibility was obtained with the Haemoscope.

Concerning the relative accuracy of each procedure, we believe that they should be listed in the order indicated in table 6. It should be emphasized that this represents purely a personal impression and is not supported by any specific data, although it will be readily accepted, we are sure, that the routine direct red blood cell count is the least accurate of all the procedures considered.

The Wintrobe hematocrit method shows the greatest degree of reproducibility followed closely in order by the specific gravity, Haemoscope hemoglobin, Haemoscope red cell count, and capillary hematocrit procedures. Here again, the direct chamber erythrocyte counting method shows the least promising results.

TABLE 5.—*Reproducibility of Screening Methods.*

	Hgb. Leitz (Gm. /100 cc.)	Hgb. Haemoscope (Gm. /100 cc.)	RBC Direct (millions /cu. mm.)	RBC Haemoscope (millions /cu. mm.)	Hematocrit Wintrobe (%)	Hematocrit Capillary (%)	Specific Gravity
Range	0.50	0.50	0.57	0.25	1.00	1.00	0.0010
Std. Dev.	0.18	0.19	0.21	0.11	0.43	0.41	0.00043
Range	1.40	0.10	0.20	0.13	0.00	1.50	0.0000
Std. Dev.	0.36	0.05	0.09	0.04	0.00	0.59	0.00000
Range	0.45	0.20	0.12	0.16	0.00	1.00	0.0011
Std. Dev.	0.14	0.09	0.04	0.08	0.00	0.41	0.00043
Range	1.00	0.50	0.47	0.15	0.00	1.50	0.0015
Std. Dev.	0.31	0.22	0.14	0.06	0.00	0.54	0.00060
Range	0.70	0.30	0.82	0.05	1.00	1.00	0.0008
Std. Dev.	0.25	0.11	0.37	0.02	0.50	0.41	0.00033
Range	1.05	0.10	0.46	0.14	1.00	1.50	0.0007
Std. Dev.	0.33	0.05	0.15	0.07	0.50	0.65	0.00027
Max. Range	8.4%	3.0%	17.0%	4.0%	1.8%	4.2%	2.5%
Average Std. Dev.	0.206	0.118	0.169	0.063	0.164	0.50	0.00034

TABLE 6.—*Comparison of Hematologic Methods.*
(Listings from best to worst.)

Accuracy	Ease and Simplicity	Reproducibility
Hematocrit, Wintrobe	Hematocrit, Capillary	Hematocrit, Wintrobe
Hematocrit, Capillary	Hemoglobin, Leitz	Specific Gravity, B-H
Specific Gravity, B-H	Hemoglobin, Haemoscope	Hemoglobin, Haemoscope
Hemoglobin, Haemoscope	RBC, Haemoscope	RBC, Haemoscope
Hemoglobin, Leitz	Hematocrit, Wintrobe	Hematocrit, Capillary
RBC, Haemoscope	Specific Gravity, B-H	Hemoglobin, Leitz
RBC, Direct	RBC, Direct	RBC, Direct

Regarding the ease and simplicity of the procedures, the capillary hematocrit determination seems to be the easiest to perform. Certainly the direct red cell count technically is the most tedious and time consuming of all.

In following patients through the course of an illness, as a guide to possible blood loss, or to determine changes resulting from transfusion, the accuracy with which these measures of red cell and hemoglobin contents of the blood can be duplicated is a matter of as much importance as the inherent accuracy of the procedures. Hematocrit or whole blood specific gravity determinations appear to be the most accepta-

ble procedures from this standpoint, although it is doubtful that specific gravity determinations could be adapted to routine laboratory use.

CONCLUSIONS

It is thought that the relatively greater reproducibility of the Haemoscope red cell count, as well as its ease and simplicity of operation, certainly would justify the substitution of this type of procedure for the direct chamber count in routine admission work. It is recommended, however, that in detailed hematologic studies, in cases where there is evidence of pronounced microcytosis or macrocytosis in the stained smear, careful direct chamber counts be done in duplicate or triplicate using certified counting chambers and pipettes.

We believe that, in comparison, it would be no more costly nor time consuming to use a capillary hematocrit determination, Haemoscope erythrocyte count, Haemoscope hemoglobin determination, white cell count, and differential than to do the standard, accepted, and time-honored complete blood count, composed of a direct red blood cell count, photometric hemoglobin determination, white blood cell count, and differential. Certainly the former procedures would yield more accurate and reproducible results. The danger of overlooking significant alterations in cell size and hemoglobin content probably would be eliminated if direct chamber red cell counts were performed in those cases in which the stained smear showed a significant degree of microcytosis or macrocytosis. In 350 routine admission cases, we found 4 per cent to fall within this group.

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Harris Hospital.

Further Comments on Cobalt-Iron Therapy of Anemia of Prematurity

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IN THE May issue of the TEXAS STATE JOURNAL OF MEDICINE an article entitled "Effect of a Cobalt-Iron Mixture on the Anemia of Prematurity"[2] indicated that the use of a cobalt-iron mixture given to premature infants resulted in slightly higher hematocrit and hemoglobin values than in a control group. The 16 infants who received the cobalt-iron mixture were reported as showing no harmful effects despite the large doses. A somewhat similar study reported by Coles and James in the *Archives of Diseases of Childhood*[1] gave approximately the same results in 20 prematures. They were able to show that the administration of a cobalt-iron mixture for a very short period was able to keep such a treated group at a higher hemoglobin level than other control babies. They made no mention of harmful effects of the cobalt-iron preparations used.

Gross, Kriss, and Spaet from San Francisco, at the May, 1954, meeting of the American Pediatric Society reported the occurrence of thyroid hyperplasia in children with sickle cell anemia who were being treated with a cobalt-iron mixture. At the time of the presentation of this material before the pediatric group other physicians commented that they too had seen thyroid enlargement in patients receiving cobalt-iron mixtures. A recent experience here in Dallas has led me to concur in the belief that cobalt-iron mixtures can result in thyroid enlargement and consequently that whenever such medications are used such an effect should be looked for. A 4 month old baby who had received a cobalt-iron mixture since its premature birth developed a disease of the upper respiratory tract and then episodes of choking and cyanosis and had an enlarged thyroid gland; biopsy showed hyperplasia. In view of this finding plus the observations of others as noted earlier it is felt that cobalt-iron mixtures if given over a sufficiently long period may well result in enlarged thyroids.

However, the results of the group from England reported previously suggested that cobalt-iron mixtures need not be given for long periods. These authors were of the opinion that in the young infant, even more so than in the adult, cobalt is stored efficiently for long periods of time and that a small dose of cobalt, for perhaps no longer than three weeks, may give as beneficial an effect as cobalt administered over long periods.

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Renal Hemodynamic Response to Acute Alterations of Blood Pressure with Vasopressor and Vasodepressor Agents

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AT PRESENT in clinical medicine there are available potent drugs which are capable of causing acute alterations of the blood pressure. Norepinephrine is one of the most potent agents for raising the blood pressure, and the ganglionic blocking agents are effective in lowering it. Although the blood pressure effects of these drugs are well known, it is of great clinical importance to observe the renal hemodynamic response to these agents which accompany sudden alterations in blood pressure. This presentation, which is divided into two parts, is a consideration of the renal hemodynamic effects of these drugs. In the first part we consider the effects accompanying the changes in blood pressure due to the use of the vasopressor agent norepinephrine for the treatment of shock. In the second part we consider some aspects of the renal hemodynamic responses accompanying the treatment of hypertension with ganglionic blocking drugs.

VASOPRESSOR AGENTS

In the treatment of acute clinical shock one should consider not only the restoration of blood pressure but also improvement of the circulation to special vascular beds such as the kidney. In the kidney, this is reflected in improvement of impaired renal function which may have been manifested clinically by oliguria or anuria. It has been observed that pressor agents such as norepinephrine are effective in restoring blood pressure to normal, but the effect of this agent on renal function is more obscure and has not been completely evaluated heretofore.

Methods

Studies were performed in both dogs and human beings in which norepinephrine was administered intravenously. The effect of this pressor agent on glomerular filtration rate and renal plasma flow was determined when normotensive dogs and humans were rendered hypertensive and when dogs previously rendered hypotensive by phlebotomy and humans in acute clinical shock were rendered normotensive.

Glomerular filtration rate was determined in the dogs by the creatinine clearance method and in the humans by the inulin clearance method. Renal plasma flow was determined by the use of para-aminohippurate. Methods and techniques have been described previously.[1, 2, 3]

Results and Discussion

It was demonstrated that when normotensive dogs were rendered hypertensive by the intravenous administration of norepinephrine, a significant reduction in glomerular filtration rate and renal plasma flow occurred. This effect can be seen in table 1. As the blood pressure increases to hypertensive levels, there is an initial reduction in renal plasma flow but not in glomerular filtration rate. As the rate of the norepinephrine infusion is increased and the blood pressure is raised further, both glomerular filtration rate and renal plasma flow are depressed.

TABLE 1.—*Effect of Blood Pressure Elevation to Hypertensive Levels with Norepinephrine in Normal Dogs.*

	Urine Volume cc./min.	Blood Pressure mm. Hg.	Glomerular Filtration Rate cc./min.	Renal Plasma Flow cc./min.
Control	5.0	115	52	348
Norepinephrine	6.0	140	53	248
Norepinephrine	2.0	170	16	118

TABLE 2.—*Response in Renal Blood Flow When Blood Pressure Is Increased to Hypertensive Levels in Human Beings.*

	Control	Norepinephrine	% Control
Mean blood pressure	97	132	136
Urine volume (cc./min.)	7.6	7.9	104
Glomerular filtration rate (cc./min.)	105	98	94
Renal plasma flow (cc./min.)	706	417	60

Comparable studies were done in 9 normotensive humans using norepinephrine (table 2). Here, too, a reduction in renal plasma flow occurred when these patients were rendered hypertensive, but glomerular filtration rate was not similarly reduced. It appears that vasoconstriction in the human kidney is not as prominent a response as it is in the canine kidney. If marked renal vasoconstriction occurred in patients in shock when the blood pressure was raised to normal by norepinephrine, it would tend to preclude its use since impaired renal function already exists in the shock state. However, clinical observations indicate that such an effect does not occur, for numerous oliguric and anuric patients in shock have been ob-

Presented before the Texas Heart Association, San Antonio, May 3, 1954.

served to have improved renal function as manifested by the onset of adequate urinary output following elevation of the blood pressure toward normal by means of the administration of one of the pressor drugs.

Coinciding with this clinical observation, it has been determined that in moderate controlled hypotension brought about by the use of the ganglionic blocking drug Arfonad,* the resultant depression of

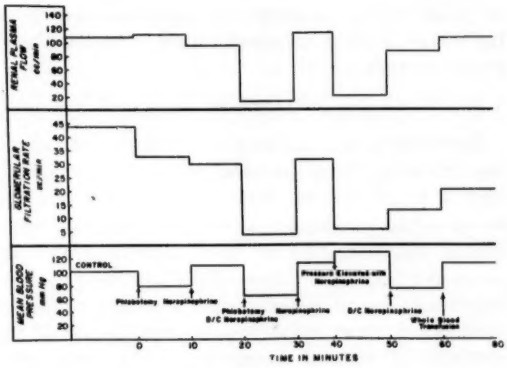

FIG. 1. The chart shows the renal hemodynamic response with the use of norepinephrine in a dog which has been rendered hypotensive by phlebotomy.

glomerular filtration rate and renal plasma flow can be elevated toward normal by the use of norepinephrine. However, since this is not comparable to acute clinical shock, a study was undertaken to determine if a similar effect could be produced in typical shock from various causes.

Preliminary studies were performed in dogs which were rendered hypotensive by means of phlebotomy. Figure 1 illustrates the response in 1 of these dogs.

TABLE 3.—*Renal Effects of Norepinephrine in Dogs Rendered Hypotensive by Phlebotomy.*

	Mean Blood Pressure mm. Hg.	Glomerular Filtration Rate cc./min.	Renal Plasma Flow cc./min.	Urine Volume cc./min.
Control	134	50	142	2.0
Phlebotomy	78	36	125	1.0
Phlebotomy	57	20	62	0.7
Norepinephrine	108	34	104	1.2
Norepinephrine	157	12	34	0.6

Following hemorrhage in the experimental animal, both glomerular filtration rate and renal plasma flow were depressed as the blood pressure fell. When the blood pressure was increased back to normotensive levels with norepinephrine, glomerular filtration rate and renal plasma flow increased. However, when the rate of infusion was too rapid and the blood pressure increased to hypertensive levels, glomerular filtration rate was depressed again as was the renal plasma flow.

Table 3 summarizes the mean values in this series of animal experiments. It can be seen that as the mean blood pressure is restored toward normal, there is considerable improvement in renal function. Also, as previously demonstrated in normal subjects, elevation of the mean blood pressure to hypertensive levels results in uniform reduction in glomerular filtration rate, renal plasma flow, and urine volume.

Following the preliminary animal studies, similar investigations were carried out in 9 patients in clinical shock. The etiology of the shock varied and included both normovolemic and hemorrhagic types. The effect produced in shock following myocardial infarction is depicted in figure 2. Following severe hypotension resulting from a myocardial infarction, glomerular filtration rate was depressed. When the blood pressure was increased toward normotensive levels, the glomerular filtration rate returned toward normal.

Although renal hemodynamics were frequently improved in hemorrhagic shock when pressor agents were used, if hemorrhage was too great, a similar degree of improvement was not observed. Under the latter circumstances, it was necessary to restore partially the blood volume before improvement of renal function was noted with norepinephrine.

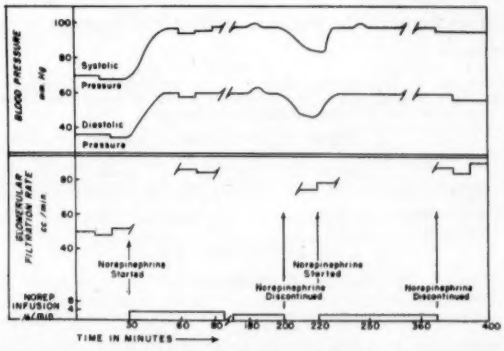

FIG. 2. The renal response to norepinephrine in shock accompanying myocardial infarction (recovery) is shown in the chart.

Figure 3 shows the effect of partial blood replacement on the response to norepinephrine. Although the blood pressure is initially raised by means of the vasopressor agent, there is no significant increase in the glomerular filtration rate and little increase in renal blood flow. However, after the administration of 350 cc. of whole blood, the subsequent administration of norepinephrine results in a significant improvement in renal blood flow and glomerular filtration rate.

Table 4 summarizes the mean values in the 9 shock

**Arfonad is d-3,4 (1',3'-dibenzyl-2'-keto-imidazolido)-1,2-trimethylene thiophonium d-camphor, which was furnished by Hoffman-LaRoche, Inc.*

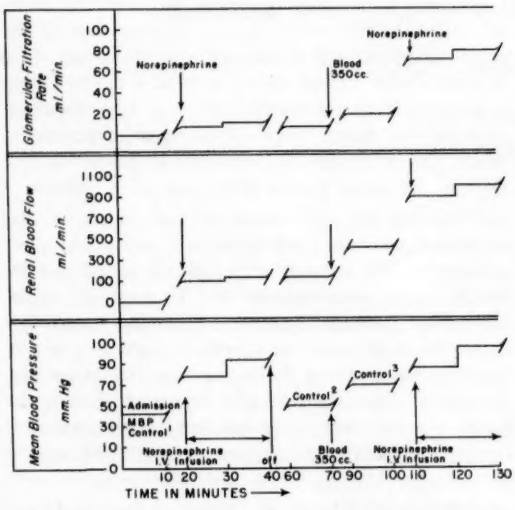

FIG. 3. Chart showing the effect of partial blood replacement on the renal response to norepinephrine in hemorrhagic shock.

patients studied. It is well to note again the improved glomerular filtration rate and renal plasma flow as the blood pressure is restored to normal levels. Following treatment, both glomerular filtration rate and renal plasma flow remain low for the group because some of the patients studied had primary renal disease.

TABLE 4.—*Renal Effects of Vasopressor Agents on Patients in Shock, Mean Values in 9 Patients.*

	Mean Blood Pressure mm. Hg.	Glomerular Filtration Rate cc./min.	Renal Plasma Flow cc./min.	Urine Volume cc./min.
Control	54	8	73	0.40
Vasopressor	73	53	404	1.40
Vasopressor	91	60	562	4.00

Comment

These observations appear to indicate that norepinephrine is effective in improving renal function in normovolemic shock and in some cases of hemorrhagic shock. There appears to be a fundamental difference between the renal response in normotensive patients when rendered hypertensive as compared to the response seen when patients in shock are rendered normotensive. In the former renal function is compromised, whereas in the latter it is improved.

VASODEPRESSOR AGENTS

In the treatment of hypertension with ganglionic blockade, it is desirable to provide sufficient blood pressure reduction to bring about improvement in cerebral and cardiac hemodynamics. At the same time renal effects of blood pressure reduction must be kept in mind since it is known that glomerular filtration rate and renal excretory capacity are dependent upon systemic blood pressure. If blood pressure reduction is excessive, renal decompensation can result. Because of this problem confronting the clinician, an attempt was made to see how far blood pressure could be reduced before producing significant reduction in glomerular filtration rate. If this could be ascertained, it would reveal a general range of blood pressure reduction which could be used clinically in the treatment of hypertension without further impairment of renal function by the therapeutic procedure.

Methods

Determination of glomerular filtration rate as related to mean blood pressure reduction was accomplished in 17 patients with untreated hypertension. Blood pressure reduction was achieved by the intravenous administration of the ganglionic blocking agent Pendiomide.* Glomerular filtration rate was determined in all patients by the inulin clearance method, and mean blood pressure was determined by intra-arterial femoral manometry. The ganglionic blocking drug was administered after three consecutive control periods in which determination of mean blood pressure and glomerular filtration rate was obtained. The mean blood pressure was reduced gradually in step-wise fashion, approximately 20 mm. of mercury at a time. With each reduction in the mean blood pressure, two terminations of glomerular filtration rate were made. After maximum mean blood pressure reduction was reached, the blood pressure was kept at this level for at least one hour, after which two additional determinations of glomerular filtration rate were made. The same study was performed in an additional 8 patients with the use of the ganglionic blocking drug Arfonad (table 5).

For comparison, a similar study was performed in 9 patients with normal blood pressure in whom Pendiomide was used to lower the blood pressure to hypotensive levels, and the resultant effect on glomerular filtration rate was determined.

Results and Discussion

It was noted that in both the hypertensive and the normotensive patients there was an initial decrease in glomerular filtration rate as the blood pressure was reduced. Following this, there was a rise in glomerular filtration rate in spite of continued reduction of the mean blood pressure and then a second decline in glomerular filtration rate which persisted

*Pendiomide is pentamethyl–diethyl–3–aza–pentane–1,5–diammonium–dibromide, which was furnished by Ciba Pharmaceutical Products, Inc.

as the mean blood pressure was kept at the maximum reduction level.

Table 5 shows a comparison of the results obtained in the hypertensive patients and the normotensive patients. These average values show that in patients with hypertension when the blood pressure is lowered with Pendiomide into a normal range (mean blood pressure of 95 mm. of mercury) amounting to a 38 per cent reduction, the glomerular filtration rate is depressed far below the control value, amounting to a 26 per cent reduction. Similar results were obtained in the 8 hypertensive patients in whom blood pressure was reduced by means of Arfonad. When the mean blood pressure was lowered to 91 mm. of mercury, the glomerular filtration rate showed a 25 per cent reduction. In comparison, when the blood pressure of the normotensive group is reduced to a hypotensive range (mean blood pressure of 71 mm. of mercury), which amounts to a 28 per cent reduction, the glomerular filtration rate remains well within the range of normal and shows only a 14 per cent reduction from the control value. Of course, in terms of absolute decrease in mean blood pressure, it is more than twice as much in the hypertensive patients as it is in the normal ones. The mean control glomerular filtration rate for the hypertensive group is at the lower limit of normal because of the inclusion of a number of patients with secondary renal damage.

TABLE 5.—*Comparison of Results in Hypertensive and Normotensive Patients Showing the Effect of Reduction of Mean Blood Pressure on Glomerular Filtration Rate.*

	MBP_c	MBP_1	% Decrease	MBP_2	% Decrease	GFR_c	GFR_1	% Decrease	GFR_2	% Decrease
Average in 17 hypertensive patients after Pendiomide	153	100	35	95	38	91	61	33	67	26
Average in 8 hypertensive patients after Arfonad	143	103	28	91	36	88	63	28	66	25
Average in 9 normotensive patients after Pendiomide	97	77	21	71	28	134	111	17	115	14

MBP_c—Mean blood pressure in millimeters of mercury before Pendiomide or Arfonad (control values).
MBP_1—Value after maximum reduction in blood pressure.
MBP_2—Value after maximum reduction in mean blood pressure for one hour or more.
GFR_c—Glomerular filtration rate in cubic centimeters per minute before Pendiomide or Arfonad (control values).
GFR_1—Value after maximum reduction in blood pressure.
GFR_2—Value after maximum reduction in mean blood pressure for one hour or more.

Comment

Although a clearly defined critical blood pressure level for the maintenance of glomerular filtration rate was not found in patients with hypertension when the blood pressure was reduced by a ganglionic blocking drug, there was a significant decrease in glomerular filtration rate when blood pressure was lowered maximally. This reduction in glomerular filtration rate occurs within the normal blood pressure range. In normotensive persons, the changes in glomerular filtration rate are qualitatively similar and less marked and occur only after the blood pressure is reduced to hypotensive levels.

CONCLUSIONS

Vasopressor agents are effective in improving renal function in normovolemic shock and in some cases of hemorrhagic shock.

In contrast to the effect in shock, vasopressor agents compromise renal function when normotensive patients are rendered hypertensive.

In hypertensive patients, glomerular filtration rate is significantly depressed when the blood pressure is maximally reduced by a ganglionic blocking drug, and this reduction in glomerular filtration rate occurs within the normal blood pressure range.

A clearly defined critical blood pressure level for the maintenance of glomerular filtration rate in hypertensive patients was not found in this study.

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Baylor University College of Medicine, Texas Medical Center.

LEPROSY CASE CITED

What appears to be the first reported case of leprosy acquired during World War II military duty is described by a California physician in the September 11 *Journal of the American Medical Association*. Although some cases had been expected in servicemen stationed in regions such as the Philippines and this is the first reported, Dr. Norman E. Levan, Bakersfield, said that some instances of the disease may be anticipated during the next thirty years or more in veterans of World War II and the Korean campaign who served in such regions.

A PROGRAM FOR ROENTGEN EXAMINATION OF HOSPITAL ADMISSIONS

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PRIOR to 1949 the Texas Tuberculosis Association had wished to see a program established whereby routine hospital admissions could receive a chest roentgen-ray examination. Consequently, the group proposed to lend a 70 mm. photofluorographic unit to the University of Texas Medical Branch at Galveston so that such a program might be initiated. This offer was accepted and by December, 1949, the project was started.

This presentation includes the result of this program to date.

First, let us consider the trend of thought throughout the country concerning the use of the miniature film. The need for survey chest photofluorograms is well established. All doctors will agree that in the field of chest diseases many potentially serious conditions show no symptoms during a considerable part of their course and that these may be detected at a much earlier stage with the use of the photofluorogram than was hitherto possible. Also, there are many conditions which in themselves may not be important but which complicate the management of other diseases.

Furthermore, photofluorography may be the first step in evaluation of the cardiovascular system. Most physicians value the visualization of the heart and great vessels as an adjunct to the management of their cases and consider the miniature film a worth-while investment from this viewpoint.

Mass chest surveys are fully twenty years old and have been studied at length. They did not reach statistically significant size, however, until the use of the photofluorogram. There is no doubt that they have served their purpose in detecting unsuspected tuberculosis, and recent studies show a gratifying decline in the tuberculosis death rate. As a result of this decline a smaller percentage of active cases are currently being detected by this method. Therefore, in recent years more emphasis has been placed on the use of hospital surveys in place of mass surveys, since hospitals and clinics are thought to contain a higher percentage of cases of undiagnosed tuberculosis and a more fruitful yield of the disease is expected from a hospital survey.

Coincident with the decline in the tuberculosis death rate, there is an increase in the death rate from lung cancer. In males bronchogenic carcinoma is replacing gastric carcinoma as the most frequent cause of death from cancer. Thus chest surveys are now being studied in respect to their role in detecting early bronchogenic carcinoma. Much emphasis is placed on the treatment of bronchogenic carcinoma while it is in a presymptomatic stage as it is only in this stage that anything approaching curative treatment can be expected.

Overholt[3, 4] recently has reported that when prompt treatment has followed discovery by roentgen-ray survey of lung cancer in the silent phase, all lesions were resectable and 75 per cent of the patients are still living. In contrast, however, in the symptomatic group approximately 90 per cent of the lesions extended beyond the lungs, and there was a possibility of cure in less than 10 per cent. Since carcinoma of the lungs can be discovered in the asymptomatic phase by photofluorography, it is a challenge to the medical profession to utilize the simple expedient of routine photofluorographic examinations of the chest to accomplish this.

PRESENT PROCEDURE

At the John Sealy Hospital the photofluorographic unit is utilized as follows on (1) all new admissions except stretcher cases, children under 6 years, and a group of pay patients; (2) personnel; (3) students; (4) food handlers every six months; (5) all obstetric patients every six months; and (6) patients from a State Department of Health prenatal clinic.

When projects are begun at the hospital such as the workmen's compensation program, a 70 mm. film is taken of all new persons entering this program. This takes a tremendous load off the main Radiology Department.

To illustrate the method of obtaining the 70 mm. film on new patients, let us follow a patient whom we shall call Miss X through the procedure. Miss X appears at the registration office as a new patient. The necessary data are recorded on the initial registration sheet to which is attached the request for a 70 mm. film. Therefore, the vital statistics are recorded by means of carbon paper on the roentgen-ray request. After the patient has registered, the clinic worker tears off the request and directs the patient to the photofluorographic unit. This unit is not

From the Department of Radiology, University of Texas Medical Branch.

Presented before the Texas Tuberculosis Association, Dallas, April 9, 1954.

situated in the Radiology Department but is adjoining the out patient clinic.

The patient presents herself to the technician who gives her a gown to wear, the film is made in a short time, and the patient goes directly to the clinic. At 6 a. m. the following day the technician develops the film, which is dried and processed by 8 a. m. It is reported and typed up that morning, and by the end of the day the report should be in the record room. It is not brought directly to the attention of the doctor, and this is a deficiency in the system which will be discussed later.

EARLY DIFFICULTIES

When this program was started in 1949, there was not as widespread use of this unit as there is today. As is frequently the case with a new idea, it was not received with enthusiasm. The education of the staff to the use of the photofluorographic unit was not an easy or rapid procedure, and considerable initial resistance was met. It had not been a routine procedure to obtain chest films on all new cases, and when the use of the 70 mm. film was proposed, even though for routine examinations, the staff believed the patients were being cheated by having a small film made instead of the conventional size radiograph.

The general opinion was that one could not see sufficient detail on a 70 mm. film to make them worth while. However, with the idea that the 70 mm. film should be tried as a screening process on new patients to separate negative from positive cases, the Department of Radiology was able to increase the number of examinations during a twelve month period by eight times. For example, in December, 1949, only 74 films were made, but in the following December 561 examinations were made. The number of examinations each year is listed in table 1. After the

TABLE 1.—*The Number of Roentgen Examinations of Chests per Year at John Sealy Hospital.*

Year	No. Examinations
1949 to 1950	2,573
1950 to 1951	7,581
1951 to 1952	6,615
1952 to 1953	8,648
1953 to 1954	8,744
Total	34,161

first year the percentage of the 70 mm. films made on new clinic and hospital admissions remained about the same from year to year. It was 86.4 per cent in 1953. The remaining 13 per cent included stretcher cases, small children, and private patients.

There were also initial difficulties in film interpretation. The radiologists had to learn to read the miniature film. There was a tendency to interpret normal markings as possible infiltration and many cases were returned for follow-up examination which proved to be normal. The duty of interpreting these films is still rotated among the staff and residents, and each new reader commits the same error until he becomes aware of the difficulty. Inevitably a number of lesions were missed. The most frequent error was failure to see a soft lesion behind the first rib and clavicle. I cannot give accurate statistics on the number of errors of omissions made by the radiologists because cases which were called normal naturally were not returned for follow-up examination. The only way to obtain reliable statistics on errors of omission would be to run a series in which the same group of patients received a 70 mm. film and a 14 by 17 inch film so that the results could be compared. This has not been done at John Sealy Hospital.

In spite of the fact that miniature films have much less resolving power than full size radiographs and hence give less detail, small lesions usually could be seen in review of the 70 mm. film after being demonstrated on a 14 by 17 inch film. It is my impression that our known errors were based more on a personal factor than on inherent differences between the miniature and conventional size film.

RESULTS

The procedure of having the registration office fill out the request has increased the number to have photofluorograms by approximately 2,000 per year. This system has been used at the John Sealy Hospital for nearly two years. Therefore, I have taken the statistics for a late eighteen month period as an example of the results the survey is now obtaining.

TABLE 2.—*Positive Results Found on 70 mm. Films During an Eighteen Month Period.*

Major Groups	No. Cases	%
Cardiovascular disease	251	33
Lung disease	337	45
Miscellaneous	74	10
Errors (follow-up normal)	85	12
Total	747	

All radiographs at John Sealy Hospital are coded and a card is punched for I.B.M. use by the statistical clerk. All positive 70 mm. cases were listed and submitted to me for this study. On surveying the positive reports, I find that the hospital has an average of 5.6 per cent positive cases, which is essentially the same average shown in the statistics from other institutions which are carrying on similar surveys. Table 2 indicates the number of positive cases divided into major groups. This 5 per cent positive group includes cardiovascular disease, which comprises about 33 per cent of the group; lung disease, which makes up about 45 per cent of the group; and a miscellaneous group, which comprises 10 per cent of the positive group. The miscellaneous group includes all other

conditions from a fractured rib to more serious conditions such as mediastinal tumor. It is necessary to include in the group of positive cases a number of errors, which comprise 12 per cent of it. These were errors in which a 14 by 17 inch film was requested without a reason given, and the follow-up film was proved to be normal.

I made no attempt to evaluate the cardiovascular group but studied the charts of every positive lung case. I found in this eighteen month period 337 positive lung cases as reported on the 70 mm. film; 141 of these were proved to have lung disease; 196 lung disease suspects were lost to follow-up study, a point on which I shall elaborate further.

There were 86 cases of proven tuberculosis in this group, 46 of which were found to be active cases and 40 considered inactive on subsequent study in the clinic. There were 10 cases of proven bronchogenic carcinoma in the group.

Because of lack of follow-up facilities and lack of interest of physicians in special clinics, 196 lung disease suspects were lost. Of these 196 cases, there were 37 that seemed so typical on the 70 mm. film that they were reported as probable tuberculosis so that it might stimulate the physician to obtain follow-up examination quickly, but the recommendation was not heeded. This is a distressing fact, and it was noted that this took place repeatedly in special clinics such as genitourinary; ear, nose, and throat; orthopedics; eye; and psychiatry. Also, there were a number of patients who made only one visit to the clinic, and a lack of follow-up facilities allowed them to slip through our fingers without being notified that they had positive chest films.

ANALYSIS OF STATISTICS

The customary figures have been presented for a project such as this. In reporting mass surveys, such figures would be significant without further analysis. However, on reporting a hospital survey, I believe a more critical analysis is needed for true evaluation of the project.

There is a definite difference between patients who have photofluorograms made in a mass survey and in a hospital survey in that, theoretically, those positive cases discovered in a mass chest survey would not have been discovered except by that method. On the other hand, a hospital survey is comprised of patients who have come to the hospital because they are ill or believe they are ill; therefore, many of them must have signs or symptoms of a chest disease or knowledge that they have a chest disease. For this reason I believe that the chart on each of the positive cases should be studied, and it should be determined whether the condition was actually discovered by means of the miniature chest film or whether the patient came to the hospital with symptoms or knowledge that would have warranted obtaining a regular chest film anyway.

The following facts were revealed: of the 141 proven lung cases, 69 had presented themselves with chest symptoms or a knowledge that they had disease and only 72 cases were asymptomatic and unsuspected. The results should read that out of 13,157 cases, 72 unsuspected lung disease cases were discovered. Out of 86 proven tuberculosis cases, 66 had presented themselves with symptoms of a chest condition or a knowledge that they had had tuberculosis; therefore, only 20 unsuspected tuberculosis cases were actually discovered. The same situation applied to the cases of bronchogenic carcinoma. Ten of the lung disease cases proved to have bronchogenic carcinoma, but only 1 was unsuspected.

COMPARATIVE COSTS

It is obvious that the previously mentioned figures should be used if one is to attempt to estimate the cost of a hospital survey.

It is not difficult to determine unit cost. Our unit cost is essentially the same as that from other institutions; that is 75 cents per person having a photofluorogram. Results show that each asymptomatic lung case or unsuspected lung disease case costs $137. The cost of detecting each unsuspected case of tuberculosis is $465.13. Although there is much current interest in detecting bronchogenic carcinoma by the survey method, if this survey had been conducted for this purpose alone, it would have cost $9,767 for each discovery of asymptomatic bronchogenic carcinoma.

These figures tally closely with those presented by Guiss[1] in reporting the value of the chest photofluorogram in the control of lung cancer from a study of 1,867,201 examinations at Los Angeles County Hospital. This is the largest survey of its kind in the nation. This study was made with the use of a medical board and adequate secretarial and social service help in order to obtain the necessary follow-up data. They found 1.9 per cent of these patients were tumor suspects, but only .08 per cent proved to have bronchogenic carcinoma. It cost $396 each to discover a chest tumor suspect, and each proven carcinoma cost $9,625.

DISCUSSION

In spite of the small percentage of proven cases from the suspects of the Los Angeles group, Guiss believed that there is no question that the mass chest survey was an effective method of discovering chest neoplasms, although it was expensive. However, he thought that only by this means could one detect lung cancer still in the asymptomatic phase. He em-

phasized that the mere screening is useless unless this lead is properly exploited and a prompt clinical investigation and surgical intervention accomplished. Also, there is a difference between the problems of tuberculosis and of cancer.

In discovering unsuspected cases of tuberculosis the population is definitely benefited, and there is a sustained effect on the extent of the problem if the patient is given proper treatment. But in attempting to control lung cancer, surveys must be repeated every six months since cancer may develop during an interval of a few months in cases which were negative at the time of the initial survey. This raises another problem, but it is believed that if, for example, all males over 40 years of age could be surveyed every six months, it might prove worth while in the control of lung cancer.

On the other hand, in a report by McNulty[2] from the *New England Journal of Medicine* early this year one finds a more depressing viewpoint. He reported on a survey centered on bronchogenic carcinoma. In this survey the incidence of bronchogenic carcinoma was 1 to 14,000 cases. He thought that this is a discouragingly low figure and that more than one-half of the lesions which were discovered were not resectable at operation. This again emphasizes the point made by the Los Angeles group that bronchogenic carcinoma must be detected early. The only way to approach this problem would be through surveys at a minimum of every six months, or much of the effort and money is wasted.

In spite of the low percentage of cases from which the patients and community benefit by the discovery of disease, it appears to be the only approach to these problems, and I believe that the physician and the interested layman desire the continuation of such a project. Most physicians today agree that the 70 mm. chest film discloses more important information than the much longer established routine of obtaining complete blood counts, urinalysis, and serologic tests for syphilis on new patients. It cannot be disputed that the detection and control of syphilis has resulted largely from obtaining compulsory routine serologic tests for syphilis on all patients seen. Therefore, I think that if we are to progress in the field of early detection of disease and in the control of disease, it is worth while to carry on these projects. They must be carried to completion in an efficient manner so that the value is not lost.

CONCLUSION

As a result of compiling this report, I see that this survey has not been carried on with maximum efficiency and economy, and it is hoped that the following suggestions will be helpful to other hospitals that might be interested in starting chest surveys:

Requests for the 70 mm. examination filled out by the registration clerk are found to expedite this matter and aid in obtaining a high percentage of examinations on new patients.

The photofluorographic unit should be adjacent to the clinic or registration office and not in the main Radiology Department.

The report must be in the hands of the doctor within twenty-four hours in order for this project to serve its purpose. This will aid in preventing unnecessary exposure to staff and other patients of unsuspected tuberculosis cases. It will also allow patients who make only one visit to the clinic to be informed of the need for further chest investigation. It will encourage the doctors in special clinics to obtain further study on the chest before they become absorbed in treating the original complaint.

A social service worker or clerk should be responsible for following up all positive 70 mm. reports and corresponding with those patients who do not return.

Education of the staff doctors to the objectives of the program should be accomplished before it is started, for without their cooperation the project becomes a costly and useless procedure.

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3. Overholt, R. H.: Cancer Detected in Surveys, Am. Rev. Tuberc. *62*:491-500 (Nov.) 1950.
4. Overholt, R. H., and Atwell, S. W.: Cancer of Lung, New York, American Cancer Society, Inc., 1950.

Ratio of Doctors to Population

The graduation of the largest class of physicians in history has brought a record ratio of one doctor for every 730 persons in the United States. The ratio is expected to be lowered even more in the next few years as the number of medical graduates rises more rapidly than the general population.

The record graduation of 6,861 doctors during 1953-1954 brings the physician population in the United States to approximately 220,100.

AMA EXHIBIT EXPOSES QUACKS

The American Medical Association's newest exhibit, titled "The Modern Medicine Show," exposes quack healers and food faddists and presents the facts as to how "medicine men" have duped the public into spending thousands of dollars for "would-be cures."

After being shown at the annual meeting of the AMA in San Francisco, the exhibit is now available from the Bureau of Exhibits for use at medical meetings, fairs, and public gatherings.

CASE REPORTS

Dissecting Aneurysm of the Thoracic Aorta Due to Trauma

FREDERICK P. BORNSTEIN,* M. D., El Paso, Texas

WITH the advent of the automobile, stresses of a magnitude previously unknown have been imposed upon the human organism. Consequently traumas and associated diseases which had not been known in previous years have developed. The case to be reported here is so unusual that I have been able to find only 1 similar case in literature.[1]

Of all the various types of aneurysms formed by the aorta, the dissecting aneurysm is the rarest and most unusual. In dissecting aneurysm there is a break of the wall. Blood digs itself a new tract between the layers of the aorta either between the intima and the media or more commonly between the media and adventitia.

Such a condition frequently causes sudden and dramatic termination of the life of the afflicted person. It is no wonder, therefore, that the older literature[2] contains numerous references to so-called traumatic dissecting aneurysms. However, study of these reports always shows that the trauma referred to consists of a relatively small effort such as sudden lifting or a rash movement. In all these cases on autopsy a previously existing disease of the aortic wall has been demonstrated. Therefore, we should accept as traumatic dissecting aneurysm only cases in which there is a clear connection between a heavy injury and the aneurysm and in which gross and histopathologic examinations of the aorta reveal the absence of preexisting diseases.

CASE REPORT

A 21 year old white man was admitted to El Paso General Hospital after an automobile accident. He was sitting next to the driver when the car went out of control and hit an iron telephone pole with sufficient impact to bend the pole. He was found by the police lying on the seat, but apparently not seriously injured, and was able to walk into the hospital under his own power. Because of a broken rib, a chest roentgenogram was made three hours after the accident; it revealed a chest which was essentially normal. At this time the man appeared to be in good condition. One hour later he went into shock, became pale, and died within ten minutes.

On autopsy 3,000 cc. of partially clotted blood was found in the left pleural cavity. The organs of the chest and abdomen were removed en bloc, and upon inspection of the aorta posteriorly, a layer of blood was located between the adventitia and the media. This bloody infiltration extended to the level of the renal arteries. In following the aorta upward, there was found in the adventitia a tear from which the hemorrhage had broken into the left pleural cavity. When the aorta was opened, a transverse tear was seen in the intima of the aorta slightly above the level of the origin of the first intercostal artery (fig. 1a).

Important findings of microscopic examination were limited to the aorta. Sections taken a considerable distance from the intimal tear, namely, in the abdominal aorta, showed a hemorrhage existing between the adventitia and the media. This established the dissecting character of the lesion. In addition, histologic examination of the wall of the aorta with hematoxylin and eosin and with Verhoeff's elastic stain proved the absence of previously existing disease of the aorta. A section taken directly from the tear showed the splintering of the medial layer and the rolling up of the intima, evidently under the impact of the injury (fig. 1b).

DISCUSSION

From the autopsy and clinical findings, it can be established that this man suffered a tear in the intima and media at the time of accident and that a dissecting aneurysm developed in the following four hours. Upon rupture of this aneurysm death occurred.

This case is similar to the one described by Leonard.[1] The location of the tear was at approximately the same place in our case and in Leonard's case,[1] whereas in Stryker's saccular aneurysms[3] the tears were found in the first part of the ascending aorta. In Leonard's case the dissecting tract extended in an upward direction; in our case it extended downward. In Leonard's case there was a survival of four days. This is important; the interval between the original injury and death in some of these cases may give the physician an opportunity for treatment after more is learned about this condition.

It is unfortunate that in neither Leonard's case, nor our case, nor in the more common cases of complete traumatic rupture of the aorta any adequate data are available to explain the mechanism involved. In traffic accidents, one would like to know the rate of deceleration, the probable direction of the travel of the body, and similar items which would permit an estimation of the magnitude of the impact sustained by the body. Without quantitive data it always will be difficult to explain the sequence of events.

Presented at the annual meeting of the Academy of Forensic Sciences, Chicago, February 27, 1954.

**Pathologist, El Paso General Hospital.*

SUMMARY

A case of a partial traumatic rupture of the aorta followed by a dissecting aneurysm is presented. This is the second case in literature so reported.

REFERENCES

1. Leonard, D. W.: Dissecting Aneurysm of Thoracic Aorta Due to Trauma, Am. J. Surg. *69*:344-351 (Sept.) 1945.
2. Samson, P. C.: Dissecting Aneurysms of Aorta, Including Traumatic Type, 3 Case Reports, Ann. Int. Med. *5*:117-130 (Aug.) 1931.
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Providence Memorial Hospital, 2001 N. Oregon.

FIG. 1a. Transverse tear in the intima of the aorta slightly above the level of the origin of the first intercostal artery.

b. Photomicrograph of a section taken from the tear and showing splintering of the medial layer and rolling up of the intima.

Radiological Physics Course

Beginning October 7 and continuing for twenty-four weeks each Thursday afternoon for an hour, a course in radiological physics is being offered in Houston by the University of Texas Postgraduate School of Medicine in cooperation with the Texas Medical Association, the Texas State Department of Health, and the Texas Academy of General Practice. W. K. Sinclair, Ph. D., is the instructor in charge, and A. Cole, Dr. G. H. Fletcher, Dr. J. E. Richardson, and Dr. R. J. Shalek assist. Twenty-four hours' credit is given for the course, the tuition for which is $10.

Some of the lectures to be presented include physical principles of the diagnostic use of roentgen rays, the measurement of radioactive isotopes, dosimetry, physical aspects of radiobiology, applications of electronics in radiology, and radiological protection. A complete schedule of weekly lectures may be obtained from the postgraduate school, Texas Medical Center, Houston.

INDUSTRIAL POLICYHOLDERS MORTALITY

Mortality among industrial policyholders of the Metropolitan Life Insurance Company set a new low record during the first half of 1954. According to the company's statisticians, 650 per 100,000 policyholders compares with 667 per 100,000 for the first six months of 1950, which was previously the lowest registered mortality rate.

Among the males the death rate for all ages under 75 years combined was about the same as in 1953, when the rate was 670 per 100,000. Female policyholders recorded a lower death rate this year than last in every age group.

Cancer and allied conditions were the only major causes of death to show a rise in mortality over last year. The rate rose from 124.8 to 129.5 per 100,000 for the first half of 1954. The cardiovascular-renal diseases, diabetes, and tuberculosis death rate was lower than that for the same period last year.

NEWS

COMING MEETINGS AND CLINICS

Texas Medical Association, Fort Worth, April 24-27, 1955. Dr. F. J. L. Blasingame, Pres.; Mr. N. C. Forrester, 1801 North Lamar Blvd., Austin, Executive Secy.

American Medical Association, Miami, Fla., Nov. 30-Dec. 3, 1954. Dr. Walter B. Martin, Norfolk, Va., Pres.; Dr. George F. Lull, 535 North Dearborn St., Chicago 10, Secy.

NATIONAL AND REGIONAL

American Academy of Allergy, New York, Feb. 7-9, 1955. Dr. John M. Sheldon, Ann Arbor, Pres.; Dr. Frances C. Lowell, 65 E. Newton St., Boston, Secy.

American Academy of Dermatology and Syphilology, Chicago, Dec. 4-9, 1954. Dr. Fred D. Weidman, Philadelphia, Pres.; Dr. John E. Rauschkolb, P. O. Box 6565, Cleveland 1, Secy.

American Academy of General Practice, Los Angeles, March 28-31, 1955. Dr. W. B. Hildebrand, Menasha, Wis., Pres.; Mr. Mac F. Cahal, 406 W. 34th St., Kansas City 2, Executive Secy.

American Academy of Obstetrics and Gynecology, Chicago, Dec. 13-17, 1954. Dr. Bayard Carter, Durham, N. C., Pres.; Dr. C. Paul Hodgkinson, 116 S. Michigan Blvd., Chicago 3, Secy.

American Academy of Ophthalmology and Otolaryngology, New York, Sept. 14-24, 1955. Dr. Walter H. Theobald, Chicago, Pres.; Dr. W. L. Benedict, 100 First Ave. Bldg., Rochester, Minn., Secy.

American Academy of Pediatrics, Chicago, Oct. 4-7, 1954. Dr. Roger L. J. Kennedy, Rochester, Minn., Pres.; Dr. E. H. Christopherson, 610 Church St., Evanston, Ill., Secy.

American Association for Thoracic Surgery, Atlantic City, N. J., April 24-26, 1955. Dr. Edward S. Welles, Saranac Lake, N. Y., Pres.; Dr. Paul C. Samson, 3959 Happy Valley Rd., Lafayette, Calif., Secy.

American Association of Genito-Urinary Surgeons, Monterey, Calif., May 22-25, 1955. Dr. Fletcher H. Colby, Boston, Pres.; Dr. John A. Taylor, 2 E. 45th St., New York 22, Secy.

American Association of Obstetricians, Gynecologists and Abdominal Surgeons. Dr. Herbert F. Schmitz, Chicago, Pres.; Dr. F. R. Lock, Bowman Gray School, Winston-Salem, N. C., Secy.

American Cancer Society. Dr. Guy Aud, Louisville, Ky., Pres.; Mr. M. R. Runyon, 47 Beaver St., New York. Executive Vice-Pres.

American College of Allergists, Chicago, April 25-30, 1955. Dr. Homer Prince, Houston, Pres.; Dr. Fred W. Wittich, 423 La Salle Medical Bldg., Minneapolis 2, Secy.

American College of Chest Physicians, Atlantic City, N. J., June 2-5, 1955. Dr. William A. Hudson, Detroit, Pres.; Mr. Murray Kornfeld, 112 E. Chestnut St., Chicago 11, Executive Secy.

American College of Physicians, Philadelphia, April 25-29, 1955. Dr. C. C. Sturgis, Ann Arbor, Mich., Pres.; Mr. E. R. Loveland, 4200 Pine St., Philadelphia 4, Secy.

American College of Radiology, Chicago, Feb. 4, 1955. Dr. Howard P. Doub, Detroit, Pres.; Mr. W. C. Stronach, 20 N. Wacker Drive, Chicago 6, Executive Secy.

American College of Surgeons, Atlantic City, N. J., Nov. 14-19, 1954. Dr. Fred W. Rankin, Lexington, Ky., Pres.; Dr. Michael L. Mason, 40 E. Erie St., Chicago 11, Secy.

American Congress on Obstetrics and Gynecology, Chicago, Dec. 13-17, 1954. Dr. R. Gordon Douglas, 116 S. Michigan Ave., Chicago 3, Chairman.

American Congress of Physical Medicine and Rehabilitation. Dr. William D. Paul, Iowa City, Pres.; Dr. Frances Baker, 1 Tilton Ave., San Mateo, Calif., Secy.

American Dermatological Association, Belleair, Fla., April 17-21, 1955. Dr. Richard S. Weiss, St. Louis, Pres.; Dr. J. Lamar Callaway, Duke Hospital, Durham, N. C., Secy.

American Gastro-Enterological Association, Atlantic City, N. J., June 4-5, 1955. Dr. Dwight L. Wilbur, San Francisco, Pres.; Dr. H. Marvin Pollard, University Hosp., Ann Arbor, Mich., Secy.

American Gynecological Society, Quebec, Canada, May 23-25, 1955. Dr. Philip F. Williams, Philadelphia, Pres.; Dr. John I. Brewer, 104 S. Michigan Ave., Chicago, Secy.

American Heart Association, New Orleans, Oct. 26-30, 1955. Dr. E. Cowles Andrus, Baltimore, Pres.; Mr. Irving Hexter, 44 E. 23rd St., New York 10, Secy.

American Hospital Association. Mr. Ritz E. Heerman, Los Angeles, Pres.; Dr. Edwin L. Crosby, 18 E. Division St., Chicago, Executive Director.

American Laryngological, Rhinological, and Otological Society, Hollywood, Fla., March 15-17, 1955. Dr. Kenneth M. Day, Pittsburgh, Pres.; Dr. C. S. Nash, 277 Alexander St., Rochester 7, N. Y., Secy.

American Neurological Association, Chicago, June 13-15, 1955. Dr. Percival Bailey, Chicago, Pres.; Dr. H. Houston Merritt, 710 W. 168th St., New York 32, Secy.

American Ophthalmological Society, W. Sulphur Springs, W. Va., June 2-4, 1955. Dr. Everett L. Goar, Houston, Tex., Pres.; Dr. M. C. Wheeler, 30 W. 59th St., New York 19, Secy.

American Orthopedic Association, W. Sulphur Springs, W. Va., June 19-22, 1955. Dr. J. Warren White, Honolulu, Hawaii, Pres.; Dr. George O. Eaton, 4 E. Madison St., Baltimore 2, Secy.

American Pediatric Society, Quebec, Canada, June 13-17, 1955. Dr. Alfred H. Washburn, Denver, Pres.; Dr. A. C. McGuinness, 237 Medical Laboratory, University of Pennsylvania, Philadelphia 46, Secy.

American Proctologic Society, New York, June 1-4, 1955. Dr. A. W. Martin Marino, Brooklyn, N. Y., Pres.; Dr. Karl Zimmerman, 3500 Fifth Ave., Pittsburgh 13, Secy.

American Psychiatric Association, Atlantic City, N. J., May, 1955. Dr. Alfred P. Noyes, Norristown, Pa., Pres.; Dr. William Malamud, 80 E. Concord St., Boston 18, Secy.

American Public Health Association, Buffalo, N. Y., Oct. 11-15, 1954. Dr. Hugh R. Leavell, Boston, Pres.; Dr. R. M. Atwater, 1790 Broadway, New York 19, Executive Secy.

American Society of Anesthesiologists, Cincinnati, Oct. 25-30, 1954. Dr. Ralph T. Knight, Minneapolis, Pres.; Dr. J. E. Remlinger, Jr., 188 W. Randolph St., Chicago, Secy.

American Society of Clinical Pathologists. Dr. John R. Schenken, Omaha, Pres.; Dr. Clyde G. Culbertson, 1040 W. Michigan St., Indianapolis 6, Secy.

American Surgical Association, Philadelphia, April 27-29, 1955. Dr. John H. Gibbon, Jr., Pres.; Dr. R. Kennedy Gilchrist, 59 East Madison, Chicago 3, Secy.

American Urological Association, Los Angeles, May 16-19, 1955. Dr. W. Joseph McMartin, Omaha, Neb., Pres.; Dr. C. H. deT. Shivers, 121 S. Illinois Ave., Atlantic City, N. J., Secy.

Association of American Physicians and Surgeons, Delegates Interim Meeting, Chicago, Oct. 1-2, 1954. Dr. Thomas G. Goldsmith, Greenville, S. C., Pres.; Mr. Harry E. Northam, 360 N. Michigan Ave., Chicago 1, Executive Secy.

International College of Surgeons, U. S. Chapter. Dr. William R. Lovelace, Albuquerque, N. M., Pres.; Dr. Karl Meyer, 1516 Lake Shore Drive, Chicago, Secy.

National Tuberculosis Association, Milwaukee, May 23-27, 1955. Dr. John H. Skavlem, Cincinnati, Pres.; Mrs. Morrell DeReign, 1790 Broadway, New York 19, Secy.

Radiological Society of North America, Los Angeles, Dec. 5-10, 1954. Dr. Eugene P. Pendergrass, Philadelphia, Pres.; Dr. D. S. Childs, 713 E. Genesee, Syracuse 2, N. Y., Secy.

Southern Medical Association, St. Louis, Nov. 8-11, 1954. Dr. Alphonse McMahon, St. Louis, Pres.; Mr. C. P. Loranz, 1020 Empire Bldg., Birmingham 3, Ala., Secy.

Southern Psychiatric Association, Louisville, October, 1954. Dr. John D. Trawick, Louisville, Ky., Pres.; Dr. Joseph L. Knapp, 210 N. Westmoreland, Dallas, Secy.

Southern Surgical Association, Hollywood, Fla., Dec. 7-9, 1954. Dr. John C. Burch, Nashville, Pres.; Dr. George Finney, 2947 St. Paul St., Baltimore, Secy.

Southwest Allergy Forum. Dr. Henry D. Ogden, New Orleans, Pres.; Dr. Stanley Cohen, 1441 Delachaise St., New Orleans, Secy.

Southwest Regional Cancer Conference, Fort Worth, Oct. 21, 1954. Dr. John L. Wallace, Box 1719, Fort Worth, Chm.

Southwestern Medical Association, El Paso, Nov. 17-19, 1954. Dr. Willard W. Schuessler, El Paso, Pres.; Dr. Celso C. Stapp, 800 Montana, El Paso, Secy.

Southwestern Surgical Congress. Dr. Philip B. Price, Salt Lake City, Pres.; Dr. C. R. Rountree, 1227 Classen Drive, Oklahoma City 3, Secy.

Tri-State Medical Society, Texarkana, September, 1955. Dr. William B. Harrell, Texarkana, Pres.; Dr. Karlton Kemp, 408 Hazel, Texarkana, Ark., Secy.

United States-Mexico Border Public Health Association. Mr. Richard F. Poston, San Francisco, Pres.; Dr. Sidney B. Clark, 314 U. S. Court House, El Paso, Secy.

STATE

Private Clinics and Hospitals Association of Texas, Corpus Christi, Dec. 4-5, 1954. Dr. W. R. Swanson, Taylor, Pres.; Dr. John Dupree, Levelland, Secy.

Texas Academy of General Practice. Dr. C. Forrest Jorns, Houston, Pres.; Dr. Woodson W. Harris, 1410 Nickerson, Austin, Secy.

Texas Academy of Internal Medicine, Galveston, Dec. 11-12, 1954. Dr. Martin S. Buehler, Dallas, Pres.; Dr. George M. Jones, 1314 Medical Arts Bldg., Dallas, Secy. Meetings restricted to members.

Texas Air-Medics Association. Dr. J. S. Minnett, Dallas, Pres.; Dr. C. F. Miller, P. O. Box 1338, Waco, Secy.

Texas Association of Blood Banks, Abilene, Dec. 3-4, 1954. Dr. C. T. Ashworth, Fort Worth, Pres.; Miss Marjorie Saunders, 3500 Gaston Ave., Dallas, Secy.

Texas Association of Obstetricians and Gynecologists, Houston, February, 1955. Dr. G. F. Goff, Dallas, Pres.; Dr. Carey Hiett, 815 Fifth Ave., Fort Worth, Secy.

Texas Chapter, American College of Chest Physicians, Fort Worth, April 24, 1955. Dr. Howard E. Smith, Austin, Pres.; Dr. John Wiggins, 1707 Medical Arts Bldg., Fort Worth, Secy.

Texas Club of Internists. Victor E. Schulze, San Angelo, Pres.; Dr. Charles Darnall, Capital National Bank Bldg., Austin, Secy.

Texas Dermatological Society, Fort Worth, April 24, 1955. Dr. Paul H. Power, Waco, Pres.; Dr. Thomas L. Shields, 1216 Pennsylvania Ave., Fort Worth, Secy.

Texas Diabetes Association, Fort Worth, April 24, 1955. Dr. George M. Jones, Dallas, Pres.; Dr. Hugo Engelhardt, P. O. Box 2180, Houston, Secy.

Texas Division, American Cancer Society. Mr. Travis Wallace, Dallas Pres.; Mr. J. Louis Neff, 1609 Colorado, Austin, Executive Director.

Texas Geriatric Society, Fall, 1954. Dr. Henry H. Niehuss, Longview, Pres.; Dr. Frank V. Mondrik, 214 Bramlette Bldg., Longview, Secy.

Texas Heart Association, Fort Worth, April 25, 1955. Dr. George R. Herrmann, Galveston, Pres.; Mr. Edgar M. Brown, Jesse H. Jones Library Bldg., 1133 M. D. Anderson Blvd., Houston, Executive Director.

Texas Hospital Association, Houston, April 12-14, 1955. Mr. W. U. Paul, El Paso, Pres.; Mrs. Ruth Barnhart, 2210 Main St., Dallas, Secy.

Texas Neuropsychiatric Association, Galveston, Oct. 24-25, 1954. Dr. Edgar S. Ezell, Fort Worth, Pres.; Dr. Bruce H. Beard, 1519 Pennsylvania, Fort Worth, Secy.

Texas Orthopedic Association, Fort Worth, April 25, 1955. Dr. Brandon Carrell, Dallas, Pres.; Dr. Margaret Watkins, 3629 Fairmount St., Dallas, Secy.

Texas Pediatric Society, Fort Worth, Oct. 22-23, 1954. Dr. Robert L. Moore, Dallas, Pres.; Dr. James N. Walker, 3616 Tulsa Way, Fort Worth, Secy.

Texas Proctologic Society. Dr. Jack Kerr, Dallas, Pres.; Dr. John McGivney, 2202 Avenue L, Galveston, Secy.

Texas Public Health Association, Galveston, Feb. 13-16, 1955. Mr. Ed Riedel, Austin, Pres.; Mr. H. E. Drumwright, City Health Department, Dallas, Executive Secy.

Texas Radiological Society, Houston, Jan. 21-22, 1955. Dr. E. F. Lyon, Jr., San Antonio, Pres.; Dr. R. P. O'Bannon, 650 Fifth Ave., Fort Worth, Secy.

Texas Railway and Traumatic Surgical Association, Fort Worth, April 25, 1955. Dr. Raleigh White, Temple, Pres.; Dr. W. D. Marrs, 306 Broadway, Fort Worth, Secy.

Texas Rheumatism Association. Dr. Alfred W. Harris, Dallas, Pres.; Dr. Charles H. Cornwell, Marlin, Secy.

Texas Society for Mental Health, Mineral Wells, 1955. Dr. Charles N. Burrows, San Antonio, Pres.; Mrs. Elizabeth F. Gardner, 2504 Jarratt Ave., Austin 3, Executive Secy.

Texas Society of Anesthesiologists, Fort Worth, April 24, 1955. Dr. Frank O. Barrett, El Paso, Pres.; Dr. Milton M. Rosenzweig, 200 Wildwood Dr. E., San Antonio, Secy.

Texas Society of Gastroenterologists and Proctologists, Fort Worth, April 25, 1955. Dr. Charles Hardwicke, Austin, Pres.; Dr. W. T. Arnold, 1402 Hermann Prof. Bldg., Houston, Secy.

Texas Society of Ophthalmology and Otolaryngology, San Antonio, Dec. 3-4, 1954. Dr. John L. Matthews, San Antonio, Pres.; Dr. Gatlin Mitchell, 1604 Medical Arts Bldg., Fort Worth, Secy.

Texas Society of Pathologists, Dallas, Jan. 30, 1955. Dr. John J. Andujar, Fort Worth, Pres.; Dr. Lloyd R. Hershberger, Shannon Memorial Hospital, San Angelo, Secy.

Texas Surgical Society. Dr. Dudley Jackson, Sr., San Antonio, Pres.; Dr. Albert W. Hartman, 414 Navarro St., San Antonio 5, Secy.

Texas Tuberculosis Association, Galveston, April 15-16, 1955. Mrs. Joella Terrill Butler, Wichita Falls, Pres.; Miss Pansy Nichols, 2406 Manor Rd., Austin, Executive Secy.

Texas Urological Society, Corpus Christi, 1954. Dr. S. J. R. Murchison, Fort Worth, Pres.; Dr. A. J. Ashmore, 255 Medical Dental Bldg., Corpus Christi, Secy.

West Texas Surgical Society, Dec. 8, 1954. Dr. J. A. Shapira, Midland, Pres.; Dr. Milton J. Loring, 304 North N St., Midland, Secy.

DISTRICT

First District Society, Pecos, 1955. Dr. John W. O'Donnell, Alpine, Pres.; Dr. H. D. Garrett, First National Bldg., El Paso, Secy.

Second District Society. Dr. John R. Mast, Midland, Pres.; Dr. M. J. Loring, 304 North N St., Midland, Secy.

Third District Society, Borger, April, 1955. Dr. M. C. Overton, Jr., Pampa, Pres.; Dr. William Klingensmith, 215 Fisk Bldg., Amarillo, Secy.

Fourth District Society, San Angelo, Oct. 21, 1954. Dr. P. M. Wheelis, Brownwood, Pres.; Dr. James N. White, San Angelo, Secy.

Fifth and Sixth Districts Society, Corpus Christi. Dr. John J. Sloan, Corpus Christi, Pres.; Dr. E. Jackson Giles, 705 Medical-Professional Bldg., Corpus Christi, Secy.

Seventh District Society. Dr. William McLean, Austin, Pres.; Dr. John Rainey, 1709 San Antonio, Austin, Secy.

Eighth District Society, Galveston, 1955. Dr. George E. Glover, Jr., Victoria, Pres.; Dr. York Lancaster, Port Lavaca, Secy.

Ninth District Society, Houston, March 17, 1955. Dr. Thomas H. Giddings, Brenham, Pres.; Dr. Lyman C. Blair, 1212 Rothwell, Houston, Secy.

Tenth District Medical Society. Dr. John M. White, Port Arthur, Pres.; Dr. Rider Stockdale, Jasper, Secy.

Eleventh District Society, Jacksonville, Oct. 27, 1954. Dr. John Dean, Crockett, Pres.; Dr. Marlin T. Braswell, Henderson, Secy.

Twelfth District Society. Dr. Neil Buie, Marlin, Pres.; Dr. Paul H. Mitchell, Corsicana, Secy.

Thirteenth District Society, Abilene, March 2, 1955. Dr. Mal Rumph, Fort Worth, Pres.; Dr. Robert D. Moreton, 815 Medical Arts Bldg., Fort Worth, Secy.

Fourteenth District Society. Dr. J. David Thomas, Denton, Pres.; Dr. L. W. Johnston, 502 W. College St., Terrell, Secy.

Fifteenth District Society, Mount Pleasant, 1955. Dr. R. L. Johnson, Mount Pleasant, Pres.; Dr. R. L. Hardman, Mount Pleasant, Secy.

CLINICS

Dallas Southern Clinical Society, Dallas, March 14-17, 1955. Dr. Lawrence B. Sheldon, Dallas, Pres.; Miss Helga Boyd, Medical Arts Bldg., Dallas 1, Executive Secy.

Central Texas Spring Clinic, Waco. Dr. Ross Shipp, Waco, Pres.; Dr. Milton Spark, 3805 Herwal, Waco, Secy.

International Medical Assembly of Southwest Texas, San Antonio, Jan. 24-26, 1955. Dr. John M. Smith, Jr., 205 Camden St., San Antonio, Secy.

New Orleans Graduate Medical Assembly, New Orleans, March 7-10, 1955. Dr. Maurice E. St. Martin, Room 103, 1430 Tulane Ave., New Orleans 12, Secy.

North Texas-Southern Oklahoma Fall Clinical Conference. Dr. L. N. Simmons, 1518 Tenth St., Wichita Falls, Chairman.

Oklahoma City Clinical Society Conference, Oklahoma City, Oct. 25-28, 1954. Miss Alma F. O'Donnell, 512 Medical Arts Bldg., Oklahoma City 2, Executive Secy.

Postgraduate Medical Assembly of South Texas. Dr. Edward T. Smith, 906 Hermann Professional Bldg., Houston, Secy.

State Tumor Conference, Wichita Falls, April, 1955. Dr. Bailey R. Collins, 925½ Scott Street, Wichita Falls, Director.

BOARD EXAMINATIONS

Texas State Board of Examiners in Basic Sciences, Austin, Oct. 22-23, 1954. Mrs. Betty Ratcliff, 407 Perry-Brooks Bldg., Austin, Chief Clerk.

Texas State Board of Medical Examiners, Fort Worth, Dec. 2-4, 1954. Dr. M. H. Crabb, 1714 Medical Arts Bldg., Fort Worth, Secy.

Southwestern Begins Postgraduate Series With Obstetrics and Gynecology Course

The Southwestern Medical School of the University of Texas, in association with the Dallas Southern Clinical Society and under the auspices of the Postgraduate School of Medicine of the University of Texas, the Texas Medical Association, and the Texas Academy of General Practice, is offering a three-day course in obstetrics and gynecology, November 15-17, at the new Parkland Hospital, 5201 Harry Hines Boulevard, Dallas.

The course, to be taught by members of the full-time and clinical faculty of Southwestern Medical School, will give twenty hours' credit to members of the Academy of General Practice.

Those teaching will be Drs. William F. Guerriero, Mary A. Jennings, Douglas M. Haynes, J. R. Jordan, William F. Mengert, Jules W. Vieaux, Stewart A. Fish, G. C. Nabors, A. R. Shapiro, William P. Devereux, Oran V. Prejean, V. A. Davidson, and William G. Langston.

In addition to individual papers, four panels will be offered. They are "Caesarian Section," "Obstetrical Analgesia and Anesthesia," "Newer Drugs in Relation to Obstetrics and Gynecology," and "Genital Cancer."

The course, which is limited to fifty, will cost $5 for registration and $25 for tuition.

The tentative schedule for postgraduate courses to be presented during the school year 1954-1955, in addition to the course on obstetrics and gynecology for general practitioners, includes recent advances in special surgery for general prac-

titioners, December 2-4; pediatrics for general practitioners, January 7-9; surgical cardiac disease for internists and thoracic surgeons, February 7-9; seminar for dietitians, February 18-19; seminar for medical technologists, March 4-5; fluids and electrolytes, April 4-6; and seminar in tuberculosis for physicians sponsored jointly with the Dallas Tuberculosis Association, late May.

The annual spring conference of the Dallas Southern Clinical Society, to be held March 14-17, is jointly sponsored by the medical school, and a number of courses will be scheduled one night a week for six to ten weeks.

Further information and application forms may be obtained from Dr. John S. Chapman, assistant dean for graduate and postgraduate education of the school, 2211 Oak Lawn Avenue, Dallas 19.

Courses already presented this year were a seminar in current development in medicine for medical social workers September 9-11 and a discussion of recent advances in internal medicine October 4-6.

TRI-STATE SOCIETY CONVENES

Seven guests presented the major portion of the scientific program when the Tri-State Medical Society met September 29 and 30 in Longview. Dr. Joe Nichols, Atlanta, presided over the organization as its president.

Featured as the speakers were Dr. C. T. Ashworth, chief of pathology at Harris Memorial Hospital, Fort Worth; Dr. Arthur Grollman, professor of internal medicine at Southwestern Medical School of the University of Texas, Dallas; Dr. Ellery C. Gay, professor of plastic surgery at the University of Arkansas, Little Rock; Dr. Curtice Rosser, professor of proctology at Southwestern Medical School, Dallas; Dr. Joe Shuffield, chairman of the Division of Traumatic Surgery, American College of Surgeons, Little Rock; Dr. Jack B. Trunnell, chief of the Department of Endocrinology and Cancer Research, M. D. Anderson Hospital, Houston; and Dr. Robert Watson, professor of neurosurgery at the University of Arkansas, Little Rock.

The program was as follows:

SEPTEMBER 28

Whitehead Operation—Dr. J. R. Stamper, Shreveport.
Pathologic Physiology of Hemorrhoids—Dr. Ashworth.
Office Management of Minor Anal Condition, Including Early Hemorrhoids—Dr. Rosser.
Physiology of Hypertension—Dr. Grollman.
Nature of Cancer—Dr. Trunnell.
Proctoscopic Examination with Differential Diagnosis—Dr. Rosser.
Newer Drugs in Treatment of Hypertension—Dr. Grollman.
Pathologic Physiology of Cancer of Prostate—Dr. Ashworth.
Treatment of Cancer of Prostate—Dr. Trunnell.

SEPTEMBER 29

Burns—Dr. Gay.
Compound Fractures—Dr. Shuffield.
Terminal Phase of Hypertension—Dr. Grollman.
Present Management of Diverticulitis—Dr. Rosser.
Pathologic Physiology of Cancer of Thyroid—Dr. Ashworth.
Treatment of Cancer of Thyroid—Dr. Trunnell.
Head Injuries—Dr. Watson.
Fluid Balance—Dr. Grollman.
Pruritus Ani—Dr. Rosser.
Pathologic Physiology of Cancer of Breast—Dr. Ashworth.
Treatment of Cancer of Breast—Dr. Trunnell.

Drs. Winston C. Holman, Shreveport; W. S. Terry, Jefferson; and Frank G. Thibault, El Dorado, Ark., vice-presidents, presided over parts of the scientific sessions. Dr. V. R. Hurst, Longview, was general chairman for the convention.

Luncheons, one of them jointly with visiting wives, a dinner, and a golf tournament rounded out the two day meeting.

Dr. William B. Harrell, Texarkana, was elected president; Dr. Karlton Kemp, Texarkana, secretary-treasurer. The 1955 meeting will be in September in Texarkana.

Southwestern Medical School

Dr. George N. Aagaard has resigned as dean of Southwestern Medical School of the University of Texas, Dallas, to assume the same position at the University of Washington School of Medicine, Seattle. He will also have charge of all other medical activities centering around the university. Dr. A. J. Gill, assistant dean of buildings and development, has been appointed acting dean.

Other resignations include that of Dr. J. J. Quilligan, associate professor of pediatrics, who joins the faculty of the College of Medical Evangelists at Los Angeles, and Dr. Louis Tobian, assistant professor of medicine, who is to be associate professor of medicine at the University of Minnesota Medical School, Minneapolis.

New staff members include Dr. Harlow Ades, professor of anatomy; Dr. Edward Pratt, professor and chairman of the Department of Pediatrics; Dr. James Hamilton, assistant professor of experimental medicine; and Drs. Marvin Siperstein and James P. Lillehei, on the Department of Medicine faculty.

Dr. J. Harold Cheek, Dallas, recently has been elected by circular vote vice-president and consequently president-elect of the alumni group; Dr. James Holman, Dallas, is the new secretary-treasurer. Dr. Ern C. Mooney, Victoria, was elected president at the group's May meeting in San Antonio.

Southern Medical Association

The forty-eighth annual meeting of the Southern Medical Association will be November 8-11 in St. Louis with the St. Louis Medical Society as host.

The meeting, which opens with a general public session on Monday afternoon, will be held at Keil Municipal Auditorium. Included in the program are scientific and technical exhibits, section meetings, Woman's Auxiliary meetings, and entertainment. The scientific sections will have half-day sessions beginning Monday afternoon and extending through Thursday. The Doctor's Day luncheon planned by the Woman's Auxiliary is scheduled for Tuesday, and the Association dinner will be held Wednesday evening.

The Southern Medical Association has provided for twenty-one sections to meet, enabling each physician present to find something in his field. The sections are general practice, medicine, gastroenterology, neurology and psychiatry, pediatrics, pathology, radiology, dermatology and syphilology, allergy, physical medicine and rehabilitation, industrial medicine and surgery, surgery, and orthopedic and traumatic surgery. Other sections are gynecology, obstetrics, urology, proctology, ophthalmology and otolaryngology, anesthesiology, public health, and medical education and hospital training.

Dr. Alphonse McMahon, St. Louis, is president of the Association, and Dr. Robert L. Sanders, Memphis, Tenn., will be installed as president during the four-day session. Dr. R. O. Muether is president of the St. Louis Medical Society, and Dr. Daniel L. Sexton is serving as general chairman of the Committee on Arrangements.

Meeting with the Association are the American College of Chest Physicians, Southern Chapter; Southern Gynecological and Obstetrical Society; Southern Society of Cancer Cytology; Southern Electroencephalographic Society; Association for Research in Ophthalmology, Southern Section; and American Therapeutic Society.

Requests for hotel accommodations should be sent to the Housing Bureau, Southern Medical Association, 911 Locust Street, Room 406, St. Louis 1.

JESSE JONES LIBRARY DEDICATED

The $1,250,000 Jesse H. Jones Library Building, Houston, was dedicated on September 9 in a program in which Dr. M. D. Levy, president of the Houston Academy of Medicine, gave the address of welcome. John T. Jones, Jr., gave an address which was followed by a speech on "The Medical Library in a Medical Center and Community" by Chauncey D. Leake, Ph. D., Galveston, dean of the University of Texas School of Medicine. Dr. C. C. Cody, Jr., Houston, gave the dedication address, and Dr. C. A. Dwyer, Houston, presented a plaque to Jesse H. Jones.

The four-story building was paid for entirely through contributions. Mr. and Mrs. Jesse H. Jones gave $600,000 to the building through the Houston Endowment, Inc.; The M. D. Anderson Foundation, $300,000; the oil companies of the Houston area, $75,000; and doctors and laymen, the other $275,000. The Texas Medical Center provided the land on which the building stands.

The library is housed on the first two floors with stacks for 140,000 volumes. In addition to a Fellows Room, which is furnished as an informal reading room where doctors may discuss their professional interests and problems, are a

JESSE H. JONES LIBRARY BUILDING

reading room and thirty carrells. Also on the second floor are a Rare Books Room, a small auditorium, a microfilm room, two seminar rooms, and ten individual study rooms.

On the third floor is an auditorium with a seating capacity of 516; with its high ceiling it also occupies one section of the fourth floor. A doctors' club also is included on the third floor.

The fourth floor houses the executive offices of the Harris County Medical Society, the Texas Medical Center, University of Texas Postgraduate School of Medicine, Postgraduate Medical Assembly of South Texas, Houston Heart Association, Texas Heart Association, and the Woman's Auxiliary to the Harris County Medical Society; administrative office of the Houston Committee on Alcoholism; and a branch of the Medical and Dental Service Bureau.

The color scheme throughout the building is of cocoa and various tones of green, the interior being planned to complement the exterior. The auditorium is so constructed that no amplification system is needed.

A portrait of Mr. Jones hangs in the front lobby, as do portraits of Dr. C. C. Cody, Jr., chairman of the Library Committee, and Dr. M. D. Levy in the Fellows Room.

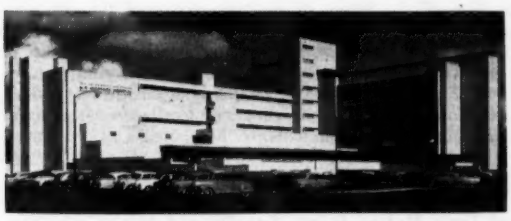
ANDERSON HOSPITAL OPENS OFFICIALLY

Clinical conferences and symposiums on basic problems in cancer research for Texas physicians will precede the formal opening of the University of Texas M. D. Anderson Hospital and Tumor Institute to be held October 23.

One unit of credit for each hour of attendance at the scientific sessions October 21 and 22 will be certified by the University of Texas Postgraduate School of Medicine to the Academy of General Practice for physicians who wish it.

Following registration and a welcome at 9 a. m. from Dr. R. E. Clark, Jr., director and surgeon in chief, four successive panel discussions lasting an hour and a half each will be held October 21. Dr. David A. Karnofsky of the Sloan-Kettering Institute in New York will lead the panel on "The Chemotherapy of Cancer"; Dr. F. A. D. Alexander of the Veterans Administration Hospital at McKinney will lead that on "The Control of Pain"; Dr. Alexander and Dr. William Brewster of Massachusetts General Hospital at Boston will be panelists in a discussion of "The Anesthesiology of Cancer Surgery"; and Dr. Herbert C. Allen of the Veterans Administration Hospital in Houston will be a member of the panel on "Studies of Thyroid Tumors."

A fifth panel, "The Team Approach to Gynecologic Cancer" with Dr. A. N. Arneson of Washington University at St. Louis as chairman, will be presented the morning of October 22 after a review of "Admission Policies of the M. D. Anderson Hospital" by Dr. Clifton D. Howe, chief of clinics. A series of four clinical conferences with presentation of patients will be held the same day with the first beginning at 11 a. m. Conducted by members of the medical staff of the hospital, these conferences will be on "The Recognition and Treatment of Cancer," "Medical Malignancies," "Head and Neck Malignancies," and "General Surgery Malignancies." Simultaneously during the afternoon will be three symposiums on basic problems of cancer research: "Biologic Effects of Radiation," "Cancer Diagnostic Tests," and "Proteins and Cancer." The first of these will be participated in by Edgar Altenberg, Ph. D., of Rice Institute, Houston, and Wilson S. Stone, Ph. D., Orville Wyss, Ph. D., and A. B. Schrank, Ph. D., of the University of Texas, Austin.



M. D. ANDERSON HOSPITAL AND TUMOR INSTITUTE

Formal dedication ceremonies for the $10,000,000 building in the Texas Medical Center will be held at 10:30 a. m. October 23. The public will be invited to a program the afternoon before.

The new hospital, occupied last March, has 310 beds and facilities to serve 300 out patients per day. Research in biochemistry, biology, pathology, radiology, physics, surgery, experimental medicine, and epidemiology has been allotted about 80,000 square feet of space. One operating room has been equipped with color television equipment so that operations can be televised to an auditorium and staff rooms elsewhere in the building. A library on the first floor is supplemented by departmental collections. A cafeteria and a coffee shop serve staff and visitors.

With exterior finish in pink marble, the hospital was financed by private philanthropy (notably from the M. D. Anderson Foundation), state funds, and a federal grant.

PERSONALS

Dr. Curtice Rosser, Dallas, was named president-elect of the International College of Surgeons at the group's September meeting in Chicago. Dr. Rosser will serve as president-elect for two years prior to taking the office of president in 1956.

Dr. Odon F. von Werssowetz, Gonzales, was awarded a gold medal and first prize for the scientific exhibit, "Supportive Assists in the Rehabilitation of Paralytic Hand," which he and his staff presented at the annual session of the American Congress of Physical Medicine and Rehabilitation September 6-11 in Washington, D. C. Dr. von Werssowetz also participated in the scientific program.

Dr. Weldon O. Murphy, Amarillo, presented a paper at the Pan-American Association of Ophthalmology, which met during the summer in Sao Paulo, Brazil.

Dr. K. J. Kemp, Corpus Christi, is quoted in the Congressional Record of July 27. His comments on the Children's Hospital Medical Center of Corpus Christi, a physical medicine center with emphasis on cerebral palsy, were included as an extension of remarks by Representative John E. Lyle, Jr., of Texas.

Dr. Morris D. Mann, Coleman, was presented a special award of appreciation by Boy Scout Troop 31 of Coleman at its August 10 meeting. Dr. Mann received an honorary membership in the troop and a statuette for his contribution to the troop in its health program.

Dr. Ralph Homan has been named to fill a vacancy on the El Paso school board.

Mrs. W. L. Brown of El Paso, widow of the late bone surgeon and past president of the Woman's Auxiliary to the El Paso County Medical Society, died the latter part of September at the age of 70 years. An active Catholic layman, Mrs. Brown also was interested especially in the Pan-American Round Table program locally, statewide and nationally.

Dr. Juanita Thacker Hart, Bellaire, and Mr. Cecil Robertson were married in Houston on August 1.

The *Bulletin* of the Alumni Association of the University of Texas Medical Branch lists *Dr. and Mrs. V. A. Stembridge,* Galveston, as parents of a girl, born on June 20. The *Bulletin* reports that boys were born to *Dr. and Mrs. Charles B. Sadler,* Amarillo, on July 12; *Dr. Worth Walton and Dr. Ida K. Walton,* Galveston, July 1; and *Dr. and Mrs. Robert J. Ulmer,* Galveston.

University of Texas Medical Branch

C. M. Pomerat, Ph. D., director of the Tissue Culture Laboratory at the University of Texas Medical Branch, Galveston, acted as moderator of a symposium at the eighth International Congress for Cell Biology in Leiden during the first week in September and later that month attended the fifth International Congress of Hematology in Paris, where he displayed the exhibit, "Cultures of Human Vascular Tissue." *John Finnerty, Ph. D.,* Department of Anatomy, also attended this congress.

Dr. C. R. Allen and Dr. Truman G. Blocker, Jr., participated in a week's lectures and demonstrations of anesthesiology and plastic surgery at the ninth annual summer program of the Medical School, University of Nuevo Leon, Monterrey, Mexico.

C. D. Leake, Ph. D., director of the Medical Branch; *Dr. Titus Harris;* and *Dr. E. I. Bruce, Jr.,* recently attended a meeting in Atlanta on mental health training and research sponsored by the Southern Regional Educational Board.

The Medical Branch has been given $45,000 by the Josiah Macy, Jr., Foundation of New York for a five year study and survey of personality factors among medical students. The money is to be used by the Student Health Service, the Department of Neuropsychiatry, and the Dean of Students.

William Verwey, Ph. D., director of Bacteriological Research of Sharp and Dohme, spoke on tools of modern research on September 21 at the Medical Branch.

Heart Disease Conference

The third annual Western Cardiac Conference will be held in Denver, November 8-13, with seven out-of-state speakers and Colorado teachers participating in the combined conference on "Clinical Electrocardiography and Recent Advances in Cardiovascular Diseases." This is sponsored by the Colorado Heart Association, Colorado State Department of Public Health, Fitzsimons Army Hospital, Denver Veterans Administration Hospital, and the University of Colorado School of Medicine. Those serving on the guest faculty are Dr. M. M. Best, Louisville, Ky.; Dr. William H. Bunn, Youngstown, Ohio; Dr. George C. Griffith, Pasadena, Calif.; Dr. Gordon B. Myers, Detroit; Dr. Myron Prinzmetal, Beverly Hills, Calif.; Dr. Henry A. Schroeder, St. Louis; and Dr. Paul Dudley White, Boston.

A three-day clinical electrocardiography course is being conducted by Colonel Edwin M. Goyette, Medical Corps, on November 8-10 at the Veterans Administration Hospital Auditorium. Lectures, panel discussions, a clinical-pathological conference, and scientific exhibits will be at the Cosmopolitan Hotel November 11-13. Additional information may be obtained from the Colorado Heart Association, 901 East Seventeenth Avenue, Denver.

Greater Longevity Achieved in Spinal Surgery

A study of 58 patients with verified intrinsic tumors of the spinal cord shows that when immediate postoperative radiation therapy is applied, patients with intrinsic tumors of the spinal cord achieve greater average longevity than those patients with surgery alone, three New York radiologists reported in the July issue of *Radiology.* The physicians, from the Department of Radiology, Columbia University College of Physicians and Surgeons, are Dr. Ernest H. Wood, Dr. Alfred S. Berne, and Dr. Juan M. Taveras.

They report that 36 of the 58 patients can be evaluated on the basis of survival beyond the average of six years assumed for the effect of surgery alone. Twenty-five of the 36 survived beyond six years, and 22 others are alive but as yet have not been followed for the full six years. Seven of these 22 patients have been followed five years.

CIVIL SERVICE EXAMINATIONS

The United States Civil Service Commission has announced new examinations for filling medical officer positions in the following Federal agencies: medical officer, paying $5,940 and $7,040 a year, and medical officer (specialist), paying $8,360 to $10,800 a year. These positions will be filled in agencies in Washington, D. C., and vicinity, and in the Public Health Service and the Children's Bureau, located throughout the United States. Positions of medical officer paying $7,425 to $10,450 a year will be filled in the Panama Canal Company-Canal Zone Government Organization. No written test is required. A physician must be a graduate of a medical school, and for most positions as medical officer must have completed an internship. For specialists, applicants must have completed appropriate study or residency training; professional medical experience is required for the higher-paying positions.

Institute on Epilepsy

The sixth Western Institute on Epilepsy will be held October 22-23 at the Jack Tar Hotel in Galveston. The sixth Institute, which is being sponsored jointly by the Hogg Foundation of the University of Texas, the Baylor University College of Medicine, and the University of Texas School of Medicine, will have Dr. Howard D. Fabing, Cincinnati, president of the American Academy of Neurology, as its honored guest. The theme of the meeting is the psychosomatic aspects of epilepsy with a portion of the program devoted to research in the disease.

Chauncey D. Leake, Ph. D., Galveston, will give the welcoming address; speakers from New York, California, Arizona, and Colorado as well as many Texas physicians will be on the program. President of the organization and chairman of the sixth Institute is Dr. John L. Otto, Galveston; vice-president, Dr. John R. Green, Phoenix; and secretary-treasurer, Dr. Madison H. Thomas, Salt Lake City, Utah.

The Institute was organized six years ago in Denver by Dr. Jerry Price of New York, Dr. Harriot Hunter of Denver, Dr. Otto, and others to create interest in epilepsy in the western part of the United States. It is aimed to appeal to both lay persons and physicians as a means of coordinating their efforts toward the eventual betterment of the epileptic. The program is open to any doctor of medicine, social worker, psychologist, or properly qualified person officially connected with an accredited agency, association, or society interested in the problem of epilepsy. The registration fee is $3, except for medical students and teachers, for whom there is no fee. The Western Institute on Epilepsy has offices at 112 North Boulevard, Galveston.

Fellowships Offered

A limited number of clinical fellowships in the fields of physical medicine and rehabilitation are being offered by the National Foundation for Infantile Paralysis to physicians who wish to become eligible for certification by the American Board of Physical Medicine and Rehabilitation.

Each recipient of a fellowship must agree to practice as a specialist in physical medicine and rehabilitation for at least two years following the completion of his fellowship and must practice in the United States or its territories. Applicants, who must be licensed to practice medicine in one or more states and be graduates of an approved school of medicine with a year of internship in an approved hospital, must be citizens of the United States (or applicants for citizenship) and must be in sound health. Fellows receive $300 to $400 per month, depending on marital status and number of dependents.

RADIATION THERAPY

A North Carolina radiologist, Dr. Robert J. Reeves, discusses the value of roentgen therapy and its nearly universal selection as the treatment of choice in lymphoid hyperplasia of the nasopharynx in the August issue of the *American Journal of Roentgenology*. Dr. Reeves, from the Department of Radiology, Duke University Hospital, Durham, outlines the value of roentgen therapy in preference to radium in treating this condition and reviews histories of more than 1,200 patients.

His survey shows that roentgen therapy produced marked improvement in 70 per cent of the more than 700 patients who suffered persistent and recurrent colds; that postnasal drip due to the infection was improved in 72 per cent of more than 300 cases and 28 per cent of the patients were relieved completely; and that impaired hearing was relieved in approximately 30 of nearly 40 patients, with the other 10 persons improved.

AMERICAN COLLEGE OF SURGEONS

The fortieth annual Clinical Congress of the American College of Surgeons, November 15-19, is expected to bring more than 10,000 fellows of the College and their guests to Atlantic City, N. J. The postgraduate education meeting will present recent surgical developments through programs including panel discussions, symposia, surgical forums, motion pictures, cine clinics, color television, and exhibits.

Dr. Charles deT. Shivers, Atlantic City, is chairman of the Atlantic City Advisory Committee on Arrangements. Dr. Alfred Blalock, Baltimore, will be installed as president for the coming year.

PHYSICIAN AND MINISTER LECTURE-CLINIC

The director's committee on religious activity of the Methodist Hospital, Lubbock, presented a lecture-clinic for physicians and ministers, "Serving the Suffering," on October 7 and 8. Speakers were Dr. Gilbert H. Marquardt, associate professor of medicine, Northwestern University Medical School, Chicago, and Russell L. Dicks, D. D. The first day they discussed the role of the physician and the minister, respectively, in helping persons suffering from the feelings of anxiety, hostility, and guilt. They spoke on how ministers or physicians hurt the other dealing with the sick, giving suggestions for closer cooperation. They also discussed work with alcoholics and each one's role in caring for the dying.

ALIEN PHYSICIANS

A survey in the September 4 issue of *The Journal of the American Medical Association* showed that a large increase in alien physicians taking postgraduate work in the United States had helped fill gaps left by young doctors now on active military duty.

During the 1953-1954 school year, 5,589 foreign physicians held appointments as interns, residents, or fellows on house staffs of the 800 civilian hospitals approved for such training by the Department of State. The states of Mississippi, North Dakota, and Arkansas had no alien physicians in training.

This program began in 1949 under the United States Information and Educational Exchange Act of 1948.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The next scheduled Part I examination for the American Board of Obstetrics and Gynecology will be held on February 4, 1955. The written examination and review of case histories for all candidates will be held in various cities in the United States and Canada and in military centers outside the United States. Twenty case abstracts are to be sent by the candidate to the secretary as soon as possible after receiving notification of eligibility to the Part I written examination.

TV Postgraduate Education

A closed circuit television program broadcast by the American College of Physicians on September 23 was the first nationwide closed circuit hookup for postgraduate medical education. The program, "A Symposium on the Management of Hypertension," was received at two Texas stations, Dallas and Houston, out of the twenty-three receiving stations.

New Tuberculosis Association Headquarters

The Texas Tuberculosis Association has moved into a new headquarters building at 2406 Manor Road, Austin. Built especially for the organization, the new structure replaces a converted residence into which the tuberculosis offices were moved in 1948.

Muscular Dystrophy Research

The National Muscular Dystrophy Research Foundation, the only national charitable health organization chartered by Texas, has as its new president F. R. C. Brown, Houston. Mr. Brown has appointed several new directors with whom he will plan a fund raising and educational campaign, including Coffee Day and the annual national Prayer Crusade, which are among those successful drives conducted previously by the foundation.

An additional grant of $1,500 from the research fund was given to the Southwest Foundation for Research and Education at San Antonio for a project conducted by Roy B. Mefferd, Jr., associate research biochemist, under the supervision of N. T. Werthessen, director of the Biological Division. The study is on "Individual Metabolic Patterns for Members of Families Having a History of Muscular Dystrophy."

The organization was founded in 1950 by two Liberty sisters, Sallie and Nadine Woods, who are victims of the disease.

New March of Medicine Show

The March of Medicine television show will have a program on schizophrenia on the National Broadcasting Company network October 31, 6:30 p. m. The show, sponsored by Smith, Kline, and French Laboratories in cooperation with the American Medical Association, will be broadcast over sixty-three television stations.

LIBRARY SECTION

RECENT PUBLICATIONS BY TEXAS PHYSICIANS

Following is a list of recent articles published by Texas physicians and available at the Memorial Library of the Texas Medical Association. Articles appearing in the TEXAS STATE JOURNAL OF MEDICINE are not included. If a physician who has had a paper printed in the past six months is not named below, the Library would appreciate being notified. Also, the Library would like to have two reprints of each article.

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Bloxsom, Allan: Use of New Apparatus for Continuous Nebulization Therapy, South. M. J. *47:*819-824 (Sept.) 1954.

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Creech, Oscar; DeBakey, M. E.; Cooley, D. A.; and Self, M. M.: Preparation and Use of Freeze-Dried Arterial Homografts, Ann. Surg. *140:*35-43 (July) 1954.

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DeBakey, M. E., and Cooley, D. A.: Surgical Considerations of Acquired Diseases of Aorta, Ann. Surg. *139:*763-775 (June) 1954.

DeBakey, M. E., and Cooley, D. A.: Successful Resection of Aneurysm of Distal Aortic Arch and Replacement by Graft, J.A.M.A. *155:*1398-1403 (Aug. 14) 1954.

DuBose, H. M.; Meador, R. S.; and McCain, B. E.: Pulmonary Fibrosis Due to Chronic Granulomatous Pneumonitis of Unknown Etiology, Am. J. Med. *17:*151-159 (July) 1954.

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Earle, K. M.: Metastatic and Primary Intracranial Tumors of Adult Male, J. Neuropath. & Exper. Neurol. *13:*448-454 (July) 1954.

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Fletcher, G. H., and others: Physical Factors in Use of Cobalt 60 in Interstitial and Intracavitary Therapy, Am. J. Roentgenol. *71:*1021-1036 (June) 1954.

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Guilford, F. R., and Wright, W. K.: Secondary Skin Grafting in Fenestration and Mastoid Cavities, Laryngoscope *64:*626-631 (July) 1954.

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Merritt, B. C.: Epithelial Carcinoma of Urinary Bladder, Dallas Med. J. *40:*29-31 (Feb.) 1954.

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BOOK NOTICES

[1]Motion of the Heart

BLAKE CABOT, *New York. 173 pages. $2. New York, Harper and Brothers, 1954.*

Sponsored by the American Heart Association, this book was written by a layman primarily for laymen. It is an absorbing and enlightening survey of the main fields of cardiovascular research from Harvey to the present, with projections into the future. Such a project is admittedly difficult—especially for its intended audience, yet the book can be recommended to patients and lay friends without reservation.

[2]Pelvic Relaxations and Herniations

JAMES M. WILSON, M. D., *Assistant Professor of Gynecology and Obstetrics, Medical College of South Carolina, Charleston. Illustrations by* ELON HENRY CLARK, *Artist and Professor of Medical Art and Illustration, Duke University School of Medicine, Durham, N. C. Edited by* E. C. HAMBLEN, M. D., F.A. C.S., *Professor of Endocrinology and Associate Professor of Obstetrics and Gynecology, Duke University School of Medicine. 64 pages. $2.75. Springfield, Ill., Charles C Thomas, 1954.*

This monograph in the American Lectures in Gynecology and Obstetrics Series continues to present an interesting subject in easily readable form. It is well illustrated, on good paper, and nicely bound. The subject matter is well organized.

The normal pelvic anatomy from the clinical rather than from the academic aspect is presented, and the changes from normal that occur with pelvic relaxations are pointed out. The monograph gives the indication for surgical interference and principles of repair without giving a lengthy detailed operative technique. It not only presents the common varieties of pelvic relaxation such as prolapse, rectocele, cystocele, and urethrocele with and without incontinence but also the frequent (but frequently misunderstood) posterior vaginal hernia and the rare obturator hernia, sciatic hernia, and herniation into the broad ligament. The description of the normal pelvic fascia and supportive structures is easily readable and understood with excellent illustrations. The various changes that occur with pelvic relaxation are likewise well presented. In discussing the frequently overlooked or misunderstood problem of posterior vaginal hernia or enterocele, the author presents the anatomic variations from normal and principles of repair so that anyone doing pelvic surgery should be able to recognize and correct this condition.

His presentation of the episiotomy should be read by every physician who does obstetrics. He includes in this monograph descriptions of all, even the rarest, pelvic herniations with adequate bibliography for further study.

This volume should be required reading by every medical student during his obstetrics and gynecology courses and available to every physician doing obstetrics and/or gynecology.

[3]Coal Tar and Cutaneous Carcinogenesis in Industry

FRANK C. COMBES, M. D., *Professor of Dermatology and Syphilology, New York University Post-Graduate Medical School; Director of Dermatology and Syphilology, Bellevue Hospital, New York. 76 pages. $2.75. Springfield, Ill., Charles C Thomas, 1954.*

In this short volume Dr. Combes presents a readable, concise, and good survey of the basic considerations of coal tar and the various factors related in its carcinogenesity. For the most part he uses common sense in presenting suggestions as to protective procedures to be used in industrial processes to protect workers from carcinogenic or possibly carcinogenic materials.

His discussion of the consideration of carcinogenic agents in the petroleum industry I believe should be construed as a consideration of possibilities in large degree until epidemiologic and animal research programs now in progress have been completed and confirm such considerations.

[4]Amebiasis

ERNEST CARROLL FAUST, A. B., M. A., Ph. D., *The William Vincent Professor of Tropical Diseases and Hygiene, Head of the Division of Parasitology, Department of Tropical Medicine and Public Health, Tulane University of Louisiana School of Medicine, New Orleans, La. 154 pages. $4.75. Springfield, Ill., Charles C Thomas, 1954.*

Amebiasis is an important disease not only because of soldiers returning from heavily infested areas but because of the proximity of Texas to Mexico. In that country actual statistics are difficult to compile, but most authorities feel that the incidence is somewhere between 25 and 50 per cent. Americans are traveling more in foreign lands, and short vacations in Mexico are becoming popular with people in Texas. A knowledge and awareness, therefore, of amebiasis seems to be imperative.

The author has stated well in his preface the purpose of this book, "to provide a concise, comprehensive picture of amebiasis as a present day clinical and public health problem. In no sense is it an exhaustive treatise of the subject." Dr. Faust is a renowned authority on this subject and accomplishes his purpose with ease. He has stripped the subject of nonessentials and gives a clear picture of the disease and the problems essential to its control.

Because an exhaustive treatise was not planned, the subject matter is presented factually with no attempt made to cover controversial points. This does not in the least detract from the book.

The monograph can be recommended to all physicians and surgeons, particularly those who see amebiasis rarely. For those physicians in intimate contact with the disease, the book may be elementary. It is, however, thought provoking and presents well a subject which should be recognized as a major public health problem.

[1]*Wylie F. Creel, M. D., Austin.*
[2]*H. O. Padgett, M. D., Marshall.*
[3]*L. R. Byrd, Jr., M. D., Port Arthur.*
[4]*George E. Clark, Jr., M. D., Austin.*

[5]An Atlas of Congenital Anomalies of the Heart and Great Vessels

JESSE E. EDWARDS, M. D., *Consulting Physician in Section of Pathologic Anatomy, Mayo Clinic;* THOMAS J. DRY, M. D., Ch. B., M. S. in Med., F.A.C.P., *Consulting Physician in Division of Medicine, Mayo Clinic;* ROBERT L. PARKER, M. D., M. S. in Med., F.A.C.P., *Consulting Physician in Division of Medicine, Mayo Clinic;* HOWARD B. BURCHELL, M. D., Ph. D. in Med., *Consulting Physician in Division of Medicine, Mayo Clinic;* EARL H. WOOD, M. D., Ph. D. in Physiol., *Consulting Physician in Section of Physiology, Mayo Clinic;* ARTHUR H. BULBULIAN, D.D.S., F.A.C.D., *Director, Museum of Hygiene and Medicine, Mayo Foundation for Medical Education and Research, Rochester, Minn. 202 pages. $13.50. Springfield, Ill., Charles C Thomas, 1954.*

This atlas contains 30 anomalies of the heart and great vessels. There is a brief description of the principal clinical features of each anomaly accompanied by a case history. In most instances a photograph and drawings of the anomalous heart are shown. Models of the heart are illustrated in the form of color plates. A chest roentgenogram and an electrocardiogram are usually shown with each case. Catheterization data, oximetry, dye-dilution methods, and intra-arterial pressure studies are given in some cases. The surgical techniques for correction of the anomalies amenable to surgery are not included.

This atlas is brief and easily read. It is recommended for students or physicians interested in becoming familiar with the various types of anomalies of the heart and great vessels.

[6]Children for the Childless

Edited by MORRIS FISHBEIN, M. D., *with chapters by Sidonie Matsner Gruenberg; Edward Weiss, M. D.; I. C. Rubin, M. D.; Nicholson J. Eastman, M. D.; J. P. Greenhill, M. D.; Fred B. Kyger, M. D.; Richard L. Jenkins, M. D.; Benjamin C. Gruenberg, Ph. D., and Dr. Fishbein. 223 pages. $2.95. New York, Doubleday and Company, Inc., 1954.*

This book is an interesting and readable presentation covering a considerable range of material. From a layman's viewpoint this should be an enjoyable and informative source of medically accepted facts. The subject matter is not covered in detail, but the high points are reviewed from the angle of both children and parents.

[7]Arthritis and Rheumatism

CHARLES LEROY STEINBERG, M. D., *Director of Arthritis Clinic and Senior Attending Physician in Medicine, Rochester General Hospital, N. Y. 326 pages. $10. New York, Springer Publishing Company, Inc., 1954.*

This book will be intensely interesting to any physician who sees arthritic patients. The beginning of the book with the physiology of the joints is one filled with an absorbing amount of information, and it offers a more complete understanding of what goes on in the joints and of the structures that make them up. The illustrations in this treatise are well done, with the color ones well balanced and presented.

The photography and the quality of editing in the book are excellent.

The chapter on pathology of rheumatoid and collagen diseases ties together the many conditions that are somewhat interwoven and related. The chapters on rheumatic fever and rheumatoid conditions are dealt with as to history, incidence and mortality, geographic and climatic factors, etiology, clinical manifestations, and laboratory with treatment. The author takes up bed rest, salicylates, digitalis, corticotropin, and cortisone with the comment that it will take a number of years to evaluate properly the latter two drugs mentioned. Finally, prevention and prophylaxis are discussed. The use of gold, phenylbutazone, vaccines, and other drugs is extensively discussed in connection with rheumatoid arthritis. The color and radiograph reproductions in this section are exceedingly good.

Gout and the malignant collagen diseases are also well discussed. The orthopedic and physical medical handling of these rheumatic and arthritic conditions and the place of hydrotherapy is brought out. The section with illustrations for self help by the arthritic patients themselves is a real contribution.

Although this book has only 326 pages, it contains a wealth of information and helps in the evaluation of these conditions.

[8]Music Therapy

Edited by EDWARD PODOLSKY, M. D., *Department of Psychiatry, Kings County Hospital, Brooklyn, N. Y. 335 pages. $6. New York, Philosophical Library, 1954.*

A compilation of present day information regarding music therapy, this book is done in thirty-two parts by thirty-nine contributors. History, physiological and psychological effects, uses, and future of music in medicine are discussed. It is probably the only such symposium to date. It particularly delves into the value of music therapy in specific psychological entities. For anyone applying total push therapy, this book will be of aid; for study and research in music therapy, the book is a must.

[9]The Thyroid

T. LEVITT, F.R.C.S. (Eng.), F.R.C.S. (Edin.), F.R.C.S.I., *Hunterian Professor of the Royal College of Surgeons of England, London; First Surgical Assistant, Thyroid Clinic, New End Hospital, London; and Demonstrator in Anatomy, Middlesex Hospital, University of London. 606 pages. $20. Baltimore, Williams and Wilkins Co., 1954.*

This rather large volume on a limited subject is well organized, concisely written, and replete with illustrations, charts, and references. It represents twenty-five years' experience in all phases of thyroid disease and attempts not only to present the latest advances in the field but also to correlate in a strictly original manner the natural history of thyroid disease. A new classification and nomenclature are presented to fit with the author's concept of unity and evolution among previously accepted separate entities of the toxic gland. An exhausting clinical and histologic study of more than 2,000 consecutive thyroidectomies is presented as the foundation of this idea. The volume also includes an excellent section on exophthalmos and localized myxedema and critical reviews of Hashimoto's and Reidel's original work. It will be of particular interest to those pathologists, surgeons, and internists who encounter more than an occasional thyroid problem.

[10]Copying and Duplicating Medical Subjects and Radiographs

H. LOU GIBSON, *Technical Editor, Eastman Kodak Company, Rochester, N. Y. 75 pages. $5. Springfield, Ill., Charles C Thomas, 1953.*

This book is well suited for those persons who have a reflex camera and will enable the owners of such equipment to obtain the best lighting procedures for copying of their

[5]*Roy L. Smith, M. D., Lubbock.*
[6]*R. W. Loveless, M. D., Bastrop.*
[7]*Joe C. Rude, M. D., Austin.*
[8]*Lee F. Scarborough, M. D., Austin.*
[9]*E. Ross Kyger, Jr., M. D., Fort Worth.*
[10]*J. C. Rude, M. D., and Gary Henry, R. T., Austin.*

subjects, whether they be patients, photographs, books, or radiographs. It gives a simple equation for figuring exposures at a new distance when the exposure at a known distance has already been established. All other factors such as film, lens opening, and lighting must remain the same.

It has a good section on the use of filters as well as the selection of the proper type of film for the purpose at hand. The duplicating of color transparencies in black and white is well handled and described, including both negatives and slides. The process of the duplicating of roentgen-ray film is taken up separately and is valuable reading for those who have much of this type of work to do. It also gives good tips on getting the most out of radiographs that are overexposed and underexposed but explains that in the final analysis there is no real substitute for well balanced film to copy.

The book is small, written in an attractive style, and easy to read. It can be recommended for those who have reflex cameras at their disposal. The book was not written or designed for those who use miniature cameras such as the Leica, but there are some good tips on lighting, background, composition, and the proper selection of both film and the type of paper to be used for printing and enlarging to make it a useful reference.

[11]Endocrinology in Clinical Practice

Edited by GILBERT S. GORDAN, M. D., Ph. D., *Assistant Professor of Medicine, University of California School of Medicine; and* H. LISSER, M. D., *Clinical Professor of Medicine and Endocrinology and Chief, The Endocrine Clinic, University of California School of Medicine, Berkeley-San Francisco. 407 pages. $10.50. Chicago, The Year Book Publishers, Inc., 1953.*

The rapid progress and numerous discoveries in this field in recent years make the need for this work evident. Subject matter is presented in a lucid style making easy, pleasant reading. The entire field of endocrinology is touched on, and this probably lends toward making the book particularly appealing to the general practitioner. However, most specialties are involved; internists, pediatricians, and gynecologists particularly should be attracted.

It would be unfair to single out certain sections for special comment in that it is difficult to compare a presentation on a subject that holds fresh appeal, like the section on the adrenal, for example, to the section on carbohydrate metabolism. In every instance the authors have apparently weighed and digested the most recent literature as well as depended on personal experiences. An additional attraction is an appendix that presents a large number of endocrine pharmaceutical preparations with trade names and dosages clarified. The purpose of this book is to furnish practical material for the practicing physician, and it succeeds in accomplishing this end.

Primer of Allergy

WARREN T. VAUGHAN, M. S., M. D., *Richmond, Va. Illustrations by* JOHN P. TILLERY. *Fourth edition, revised by* J. HARVEY BLACK, M. D., *Dallas. 191 pages. $4.25. St. Louis, C. V. Mosby Company, 1954.*

"Primer of Allergy," a guidebook for those physicians who must find their way through the mazes of this strange and tantalizing state, has been revised by Dr. Black. The changes in the fourth edition are more extensive than in the last, the new material being necessary because of new knowledge. The aim of the book is to inform better the patient as to his condition so as to get better results from his treatment. Foods are not stressed.

[11]*Jerome O. Ravel, M. D., Austin.*

Acute Renal Failure

ARTHUR GROLLMAN, Ph. D., M. D., F.A.C.P., *Professor and Chairman, Department of Experimental Medicine, Lecturer in Pharmacology and Toxicology, Southwestern Medical School of the University of Texas; Attending Physician, Parkland Hospital; Consultant in Internal Medicine, Baylor University Hospital; Consultant in Biochemistry and Physiology, Veterans Administration Hospital, Dallas. 92 pages. $4. Springfield, Ill., Charles C Thomas, 1954.*

This short monograph attempts to bring together the material available from many sources on acute renal failure. The etiology, pathology, physiology, clinical course, and treatment are presented in a practical manner.

The book is highly recommended for the general practitioner's library because it is a compact summary of the subject. The bibliography contains more than 100 references arranged in alphabetical order; the book is well indexed, making it easy to use.

Thoracic Surgery

RICHARD H. SWEET, M. D., *Associate Clinical Professor of Surgery, Harvard Medical School, Boston. Illustrations by* JORGE RODRIGUEZ ARROYO, M. D., *formerly Assistant in Surgical Therapeutics, University of Mexico Medical School. Second edition. 381 pages. $10. Philadelphia, W. B. Saunders Company, 1954.*

The first edition of this work was well received by surgeons in 1950. A complete revision was required to include the new techniques which have been accepted and alterations in others since they were first described. Only the operations that were found useful in everyday practice are given thorough consideration; many methods which are still in the trial period are mentioned. Any surgeon interested in thoracic surgery will find this up-to-the-minute text a valuable addition to his library. The illustrations are excellent.

A list of the subject headings will show the coverage of this book. Surgical anatomy of the thorax, general technical considerations, thoracic incisions, operations on the thoracic wall, operations concerning the pleural cavity, operations on the lungs, operations within the mediastinum, operations on the esophagus, abdominal operations performed through thoracic incisions, and surgery of the diaphragm are included.

The Book of Health

Compiled and edited by RANDOLPH LEE CLARK, JR., M. D., M. Sc. (Surg.), F.A.C.S., *Director and Surgeon-in-Chief, The University of Texas M. D. Anderson Hospital for Cancer Research; Professor of Surgery, The University of Texas Postgraduate School of Medicine, Houston; and National Consultant in Surgery, United States Air Force; and* RUSSELL W. CUMLEY, M. A., Ph. D., *Director of Publications, The University of Texas M. D. Anderson Hospital for Cancer Research; Professor of Medical Journalism, The University of Texas Postgraduate School of Medicine, Houston. 768 pages. $10. Houston-New York, Elsevier Press Inc., 1953.*

This one volume is a compilation by 242 doctors of what they think the average lay person should know about the body, how to keep it healthy, and what to do in case of illness. The work has been well done, and the subjects have been handled by experts who can speak with authority in their fields. There are 1,400 illustrations which add to the value of the book in beauty and delineation.

An answer to the increasing interest in medicine by the average man, this book is recommended to the layman as well as to medical students and medical personnel. It is also a valuable reference for students taking related courses in college and high school. Particularly interesting are the chapters on medicine and the law, medical history, and the medical profession.

ORGANIZATION SECTION

AMERICAN MEDICAL ASSOCIATION

AMA Begins Law Department

Beginning August 1 all requests for legal opinions and advice were directed to the newly established Law Department of the American Medical Association. The Bureau of Legal Medicine and Legislation and the headquarters staff of the Committee on Legislation have been transferred to the new department. The director is C. Joseph Stetler, secretary of the Council on National Emergency Medicine Service since 1951, and J. W. Holloway, Jr., who has headed the Bureau of Legal Medicine for many years, is serving as consultant for the new office.

MENTAL HEALTH COMMITTEE

A meeting of mental health representatives of state medical associations was held in Chicago September 17-18 under the sponsorship of the American Medical Association Committee on Mental Health. Special speakers for the meeting were Dr. Elmer Hess, Erie, Pa., President-Elect of the AMA, and Dr. Leo H. Bartemeier, Detroit, Chairman of the AMA Committee on Mental Health. Descriptions of the mental health programs of the state medical associations of Virginia, Texas, and Connecticut were presented by their respective committee chairman. Dr. Hamilton F. Ford, Galveston, represented the Texas committee. Mrs. George Turner, El Paso, President of the Woman's Auxiliary to the American Medical Association, spoke to the group at the September 18 morning meeting.

RADIO SHOWS AVAILABLE

Five more fifteen-minute radio shows of the Help Yourself to Health series are ready for shipment to county societies by the American Medical Association Bureau of Health Education. These shows, produced by the Rocky Mountain Radio Council are entitled "Rural Community Receives a New Doctor," "A New Doctor in a Rural Community," "Success of a Health Council Survey," "How to Build a Hospital," and "Nursing." Also available through the Bureau are five new fifteen-minute panel discussion programs for radio. They include "Medical Pre-Payment Plans," "New Fields of Medical Research," "Hope for Your Heart," "Advancement Against Polio," and "Superstition and Chicanery."

TEXAS MEDICAL ASSOCIATION

ASSOCIATION COMMITTEE CHANGES

Several appointments were made recently to councils and committees of the Texas Medical Association by Dr. F. J. L. Blasingame, Wharton, President.

Dr. John S. Chapman, Dallas, was appointed September 7 to fill the vacancy on the Council on Medical Education and Hospitals created by the resignation of Dr. George N. Aagaard, who has moved from Dallas to become dean of the University of Washington School of Medicine, Seattle.

Dr. Charles P. Hawkins, Fort Worth, became a member on October 1 of the Committee on Maternal Mortality; and Dr. J. W. Birdwell, Tyler, has been serving on the State Committee for American Medical Education Foundation as of August 31.

PAPERS FOR ANNUAL SESSION STILL NEEDED

Officers of some of the scientific sections of the Texas Medical Association have indicated that openings still exist on their tentative programs for the annual session next spring and that papers from members of the Association will be welcomed for review. Any physician interested in submitting a presentation in Fort Worth who has not been in touch with the appropriate section officers will find a list of the officers with their mailing addresses on page 458 of the July JOURNAL. If a completed paper is not now ready, the topic and some indication of how the author proposes to develop the subject should be forwarded to the section officers as promptly as possible.

NOVEMBER VISITATIONS

Visits to eight county societies and one district society are scheduled by officers and members of the central office staff of the Texas Medical Association during November. The county societies which will be visited are Lubbock-Crosby Counties, November 2; Lamar County (Delta County physicians will attend), November 4; Kerr-Kendall-Gillespie-Bandera Counties, November 8; Wichita County, November 9; Hill County, November 9; Jefferson County, November 16; Pecos-Jeff Davis-Presidio-Brewster, November 17; and Reeves-Ward-Winkler-Loving-Culberson-Hudspeth, November 18.

COUNTY SOCIETIES

Angelina County Society

September 16, 1954

(Reported by Forrest C. Orman, Secretary)

The Angelina County Medical Society met on September 16 in Lufkin for a social hour and a program given by two officers and a member of the central office staff of the Texas Medical Association. Denton Kerr, Houston, member of the Board of Trustees, told the group about the facilities available through the Texas Medical Association and about the function of the Board of Trustees. Milford O. Rouse, Dallas, delegate to the American Medical Association, spoke on the recent AMA meeting and discussed recent legislation affecting the medical profession. Mr. C. Lincoln Williston, Austin, assistant executive secretary, explained the aims for the coming year to better coordinate the work of the county society with that of the state organization.

Bell County Society

August 4, 1954

(Reported by F. M. Hammond, Secretary)

At the August 4 meeting of the Bell County Medical Society in Temple, R. A. Murray, Temple, and H. H. Brindley, Temple, presented a film on "Replacement of Proximal Humerus and Distal Radius with Fibular Graft." Raleigh R. Curtis, Temple, gave a report on the function and purpose of the American Medical Education Foundation and urged members to support it. He also emphasized the importance of the county medical society and announced that Mr. Philip R. Overton, Austin, legal counsel of the Texas Medical Association, and Mr. C. Lincoln Williston, Austin, assistant executive secretary, would be present at the October meeting of the group.

Bosque County Society

July 7, 1954

The Bosque County Medical Society and its woman's auxiliary met on July 7 at the home of Dr. and Mrs. Van D. Goodall, Clifton. Tom Lyles, Clifton, presented a case report of a surgical patient, using colored slides. Special guests for the program were M. O. Rouse, Dallas, who spoke on medical jurisprudence; Mr. N. C. Forrester, Austin, executive secretary of the Texas Medical Association, who spoke on topics pertaining to his work with the Association; and Mr. R. V. Voyer, Dallas, general director of the David Graham Hall Foundation for the betterment of Texas health, who spoke on pending legislation concerning Texas hospital districts.

Mrs. S. L. Witcher, Clifton, president of the local woman's auxiliary, told of the group's proposed projects.

Eastland-Callahan-Stephens-Shackelford-Throckmorton Counties Society

September 21, 1954

(Reported by M. A. Treadwell, Secretary)

Roentgen-Ray Diagnosis of Cervical Spine—V. H. Shoultz, Abilene.

The Eastland-Callahan-Stephens-Shackelford-Throckmorton Counties Medical Society met in Cisco on September 21 for a dinner and scientific program. Dr. Shoultz presented the above paper with films, after which a business meeting was held.

El Paso County Society

The El Paso County Medical Society and the auxiliary cosponsored the observance of September as Child Safety Month in El Paso with the police department, El Paso Safety Council, parent-teacher organizations, Boy Scouts, business firms, and other groups cooperating. Designation of the special month was proclaimed by the mayor; and radio, television, and newspaper publicity called attention to the need for safety in relation to children. The society and auxiliary are cooperating in the preparation of a booklet on first aid for distribution to public school children as a gift of the medical society.

Hale-Floyd-Briscoe-Swisher Counties Society

September 14, 1954

(Reported by John C. Long, Jr., Secretary)

The Hale-Floyd-Briscoe-Swisher Counties Medical Society met in Plainview on September 14 and heard Randall Heye, Plainview, director of the West Texas Poliomyelitis Center, discuss the western equine encephalitis epidemic. Plans were made for Diabetes Detection Week by the drive chairman.

Lamar County Society

September 2, 1954

(Reported by Harold E. Hunt, Secretary)

Discussion of Three Current Clinical Diagnostic Problems—O. W. Robinson, J. A. Stephens, and D. R. Lewis, Paris.

The Lamar County Medical Society had three guests present when it met in Paris on September 2. After dinner, a short business meeting was held and the above scientific program presented. It was announced that the October program was to be on tuberculosis.

Lubbock-Crosby Counties Society

July 6, 1954

(Reported by Richard K. O'Loughlin, Secretary)

Collagen Diseases—William Ishmael and Richard Payne, Oklahoma City.

Members of Lubbock-Crosby Counties Medical Society heard the above discussion presented at the July 6 meeting in Lubbock. It was followed with a discussion by Sam C. Arnett, William H. Gordon, Frank C. Goodwin, R. K. O'Loughlin, all of Lubbock, and Jay McSween, Slaton.

At the business meeting a student who plans to enter medical school this fall was given a loan of $400.

August 3, 1954

(Reported by Richard K. O'Loughlin, Secretary)

The Lubbock-Crosby Counties Medical Society met at Lubbock on August 3 and approved a request that Garza County be included in the schedule of the mobile unit x-ray for tuberculosis. O. W. English, Lubbock, spoke on his recent visit to Europe, giving his impressions of the socialistic trends in the practice of medicine there. A discussion by Sam C. Arnett, O. B. Hull, J. T. Krueger, Howard Hancock, William H. Gordon, Frank Goodwin, L. B. Smith, Roy Riddel, and Roy Sheffield, all of Lubbock, followed.

Nueces County Society

August 10, 1954

(Reported by Gerald S. Ahern, Secretary)

Management of Uterine Fibroids—G. Cooley Nabors, Dallas.

The Nueces County Medical Society met on August 10 in Corpus Christi for a short business meeting and to hear the above paper by Dr. Nabors. Elected to membership in the society were Stephen Ware, Jr., John Kohlhaas, and Mary McCaskey, all of Corpus Christi. A resolution expressing the sympathy of the society to the family of Harry Heaney was read.

September 14, 1954

(Reported by Gerald S. Ahern, Secretary)

Treatment of Cancer of Prostate with Radioactive Gold—Cecil M. Crigler, Houston.

The Nueces County Medical Society met at Corpus Christi on September 14 and elected seven physicians to membership. Those elected were Vance J. Maloney, Harold Ross Garza, John D. Reeve, John P. Moran, Ernesto Sierra, John J. DeLaney, and Robert C. Wood.

The president of the local chamber of commerce addressed the group, encouraging them to join the chamber of commerce. George Schuster, Corpus Christi, was elected to the Tumor Clinic Committee, and an amendment to the by-laws requiring a probationary period of two years for new members was approved.

Pecos-Jeff Davis-Presidio-Brewster Counties Society

July 6, 1954

Professional Public Relations—D. J. Sibley, Fort Stockton.

The Pecos-Jeff Davis-Presidio-Brewster Counties Medical Society met in Fort Stockton on July 6 to hear the above program. Prior to the meeting the society members and members of the auxiliary had dinner together.

Tarrant County Society

July 6, 1954

(Reported by S. W. Wilson, Secretary)

Symposium on Impotence—Grant F. Begley, Nealie E. Ross, W. W. Moorman, and F. C. Rehfeldt, Fort Worth.

The Tarrant County Medical Society met on July 6 in Fort Worth and heard the above scientific program. Ralph E. Campbell, Fort Worth; and William J. Nelson, Jr., Fort Worth, were elected to membership.

August 3, 1954

(Reported by S. W. Wilson, Secretary)

A film on "Glaucoma—What General Practitioners Should Know" was shown at the August 3 meeting of the Tarrant

County Medical Society by C. Harold Beasley, Fort Worth. Prior to showing the film, Dr. Beasley told members that it was prepared by the National Society for the Prevention of Blindness, and he gave some statistical information about blindness.

John J. Boluch, Fort Worth, and William B. McLeroy, Azle, were elected to membership in the society.

September 7, 1954

(Reported by S. W. Wilson, Secretary)

Tarrant County Medical Society was host to the Dallas County Medical Society at the Godfrey Ranch, east of Grapevine, on September 7. F. E. Wilson, Washington, D. C., director of the Washington office of the American Medical Association, was guest speaker.

Tom Green-Eight County Society

September 13, 1954

(Reported by Joe L. Cornelison, Secretary)

The Tom Green-Eight County Medical Society met in San Angelo on September 13 and heard a speech by the guest, William MacComb, Houston.

At the business meeting prior to the program, a Crippled Children's Committee composed of R. M. Arledge, E. C. Winkelmann, Perry J. C. Byars, Charles F. Engleking, and Henry N. Ricci, all of San Angelo, was appointed.

The society decided to provide district prizes of $100, $50, and $25 for winners of this year's essay contest, sponsored nationally by the Association of American Physicians and Surgeons.

Wilbarger County Society

July 6, 1954

Symposium on Surgery

Development and Management of Shock—J. A. Stirman, Dallas.
Emergencies During Anesthesia—M. T. Jenkins, Dallas.
Minor Incompatible Blood Transfusions—E. E. Muirhead, Dallas.

The Wilbarger County Medical Society met on July 6 in Vernon to hear the above outlined program presented by members of the faculty of Southwestern Medical School of the University of Texas. There were fifteen guests present for the dinner and scientific meeting.

DISTRICT SOCIETIES

Eighth District Society

September 23, 1954

(Reported by George E. Glover, President)

Most Frequently Encountered Malignancies in Children—Mary Ellen Haggard, Galveston.
Diagnosis and Treatment of Tumors of Cecum and Ascending Colon—Edgar J. Poth, Galveston.
Pathological Diagnosis of Pleural and Peritoneal Fluids—John H. Childers, Galveston.
Diagnosis and Treatment of Peripheral Circumscribed Lesions of Lung—A. W. Harrison, Galveston.

The Eighth District Medical Society met jointly with the American Cancer Society in Victoria on September 23. After the above outlined program was given by members of the faculty of the University of Texas School of Medicine, several cancer cases were presented by members of the society. Newly elected officers are George E. Glover, Victoria, president, and York Lancaster, Port Lavaca, secretary.

AUXILIARY SECTION

AN AWARD OF MERIT

The Woman's Auxiliary to the Texas Medical Association has another brag—it has received one of the fifty-five awards given in the United States for its work and contributions on behalf of the American Medical Education Foundation. Even though the Auxiliary has been recognized for its work in the past, members must remember that the need for additional funds is great.

Since the organization in 1951 of AMEF, 260 Texans have contributed $10,959.28 to the fund. In 1951, 31 contributed $991; in 1952, 27 contributed $1,065; and in 1953, 202 gave $8,903.28. Through 1953, the three medical schools in Texas had received a total of $185,342. Therefore, Texans have received much more than they have given. In 1952, only .32 per cent of the medical profession of the state contributed financially to the AMEF, and in 1953, 2.4 per cent of the profession donated funds.

Gifts to AMEF are combined with funds of the National Fund for Medical Education, and then the money is allotted to the various medical schools. The National Fund for Medical Education raises its money from big industry. The American Medical Association is the sole sponsor of the AMEF and co-sponsor of the National Fund.

The need for the AMEF is great. The medical schools need $10,000,000 more annually to meet operating expenses. The seventy-nine medical schools in the United States must provide doctors to take care of the needs of 158,000,000 people. These schools graduate more than 6,000 doctors each year, 1,000 more than a decade ago.

Cost of training a doctor has doubled in the past twenty years, and though tuition fees have been raised 165 per cent since 1940, tuition pays only one-fifth of the cost. Gifts, income from endowments, general university funds, and appropriations no longer meet current operating costs, let alone future demands, so funds must come from other sources. Unless new funds are made available, most medical schools are faced with three dangerous choices: (1) lowering their high teaching standards, (2) reducing the number of doctors they graduate, or (3) becoming subsidized by the government.

Mrs. J. L. Jinkins, Galveston, State Auxiliary and Southern Regional chairman of the American Medical Education Foundation, has suggested the following ways for the Auxiliary members to help obtain additional funds for the foundation:

1. Contributions from county auxiliaries.
2. Gifts from individual members.
3. Birthday gifts from members (10 cents to $1 per year of age).
4. Benefit parties (game parties, fashion shows, and teas).
5. Honorary gifts (in lieu of flowers or other gifts on birthdays or anniversaries or to pay tribute to another physician who has rendered some medical service to the Auxiliary member or a member of her family).
6. Memorial gifts (in lieu of flowers at funerals).

The Auxiliary is again called upon to help Texas carry its share of the load on medical education.

Officers of the Woman's Auxiliary to the Texas Medical Association: President, Mrs. Mark H. Latimer, Houston; President-Elect, Mrs. Joseph H. McCracken, Jr., Dallas; First Vice-President, Mrs. Mal Rumph, Fort Worth; Second Vice-President, Mrs. Harold Lindley, Pecos; Third Vice-President, Mrs. Howard R. Dudgeon, Jr., Waco; Fourth Vice-President, Mrs. Troy A. Shafer, Harlingen; Fifth Vice-President, Mrs. August J. Streit, Amarillo; Recording Secretary, Mrs. P. M. Kuykendall, Ranger; Corresponding Secretary, Mrs. William M. Palm, Houston; Treasurer, Mrs. J. C. Terrell, Stephenville; Publicity Secretary, Mrs. A. H. Neighbors, Jr., Austin; Parliamentarian, Mrs. John E. Hill, Marshall.

COUNTY AUXILIARIES

Galveston County Auxiliary honored the wives of interns and resident physicians in Galveston hospitals on August 11 with a coke party at the home of Mrs. Edgar F. Jones, Galveston. Mrs. Paul Brindley, Galveston, spoke on projects of the auxiliary.

Mrs. Haskell Hatfield, El Paso, president of the *El Paso County Auxiliary,* was requested by the Woman's Department of the El Paso Chamber of Commerce to write a play for presentation in public schools and to civic groups as a part of its clean up campaign. The play, "Don't You Be a Litterbug," expresses the relationship of health, sanitation, safety, fire prevention, and civil defense to cleaning up.

Mrs. George C. Farish, Houston, a member of the *Harris County Auxiliary,* is Republican candidate for the State Legislature, Place 3.

DEATHS

S. I. MILLER

Dr. Samuel Irving Miller, Jr., Houston, Texas, died on July 11, 1954, in a local hospital.

Dr. Miller was born in Galveston on December 14, 1912, the son of Mr. and Mrs. Samuel Irving Miller, Sr. He was graduated from Rice Institute, Houston, and from the University of Texas School of Medicine, Galveston, in 1938. He interned at Michael Reese Hospital, Chicago, until 1940, when he became an assistant resident in medicine at Billings Hospital, University of Chicago Clinics. In 1941 he took a residency in medicine at J. H. Pratt Diagnostic Hospital, Boston. He then served in the United States Army from 1942 until 1946, beginning the practice of internal medicine in Houston in 1947.

A member of the Texas and American Medical Associations through Harris County Medical Society continuously since 1947, Dr. Miller was certified by the American Board of Internal Medicine. He was a fellow of the American College of Physicians. He was a member of Alpha Omega Alpha honorary medical fraternity and was a member of the Jewish synagogue.

Survivors include his wife, Mrs. Betty (Russ) Miller, and two sons, Samuel Irving Miller, III and Ralph Henry Miller. Also surviving are his mother and a brother, Louis A. Miller.

W. H. BARNETT

Dr. William Harve Barnett, Abilene, Texas, died in a local hospital of pneumonia on July 18, 1954.

Dr. Barnett was born in Guntown, Miss., in 1866 and as an infant moved with his family to Kaufman County. After studying medicine in Louisville, Ky., Dr. Barnett was graduated in 1893 from Memphis Hospital Medical College, Memphis, Tenn., which later merged with the University of Tennessee College of Medicine. He practiced in Glen Cove for eight years and Runnells County for four years before moving to Abilene.

A charter member of the Taylor-Jones Counties Medical Society, Dr. Barnett had been a member of the Texas and American Medical Associations almost continuously since 1904. In 1947 he was elected an honorary member of the state organization. Dr. Barnett recently received a plaque from the University of Tennessee honoring him for having served his community for fifty years. He was a member of the Christian Church.

The former Miss Edna McDavid and Dr. Barnett were married on May 6, 1891, in Abilene. Mrs. Barnett died February 17 of this year. Dr. Barnett is survived by two grandsons, Robert E. Barnett, Austin, and Dr. W. L. Barnett, Cleveland; a brother, Richard Barnett, Eden; and five great-grandchildren.

An obituary ordinarily will not be published more than four months after date of death. Cooperation in reporting deaths of physicians and in furnishing appropriate biographical material promptly is solicited.

J. W. SHARP

Dr. Jack Weston Sharp, Dallas, Texas, died on July 27, 1954, in that city of gunshot wounds.

Born on January 8, 1916, in Newkirk, Okla., Dr. Sharp attended Newkirk schools and was graduated from the North Texas Agricultural and Mechanical College, Arlington, in 1935. After being graduated from Baylor University College of Medicine, then in Dallas, in 1939, he interned at St. Paul's Hospital, Dallas, in 1940. He was director of the Dallas Venereal Diseases Clinic from 1940 to 1944, except for a two-month residency in venereal diseases at Vanderbilt University in 1941. He was field consultant to the Venereal Diseases Division of the Texas State Health

DR. JACK W. SHARP

Department until 1946 and was medical director of the Riverside Hospital in Waco from 1946 until 1947, when he entered private practice in Dallas.

Dr. Sharp was a member of the Texas and American Medical Associations through Dallas County Medical Society in 1953.

He is survived by his wife; a son, Douglas Andrew Sharp, Dallas; and his grandmother, Mrs. Aldis Sharp, Newkirk.

W. A. MAUPIN

Dr. William Austin Maupin, Rowlett, Texas, died in a Santa Monica, Calif., hospital of coronary thrombosis and myocardial infarction on August 10, 1954, while visiting his daughters in Los Angeles.

Dr. Maupin was born October 20, 1869, in Kingston, Texas, the son of John A. and Martha (Hudspeth) Maupin. He was graduated from Calhoun College, Hunt County, Texas, and the Medical Department of the University of Tennessee, Nashville, in 1892, and did postgraduate work at Vanderbilt University in 1900. He practiced in Bailey for three months and had practiced in Rowlett since 1892.

A member of the American and Texas Medical Associations through Dallas County Medical Society almost continuously since 1922, he was elected an honorary member of the state organization in 1946. Dr. Maupin was a member of the Masonic Lodge and of the Knights of Pythias, was president of the Citizens Bank of Rowlett, and had

DR. W. A. MAUPIN

served numerous terms on the school board. He was local surgeon for the Missouri-Kansas-Texas Railway and a member of the Christian Church.

Surviving are Dr. Maupin's wife; two daughters, Mrs. Philip J. M. Doyle and Mrs. Corydon J. Glazier, Los Angeles; two sisters, Mrs. Geneva Largent, McKinney, and Mrs. Ann Yates, Los Angeles; two brothers, S. B. Maupin, Los Angeles, and J. R. Maupin, Dallas; and two granddaughters, Patricia Doyle and Peggy Doyle, Los Angeles.

W. E. JONES

Dr. William Edgar Jones, Texarkana, Texas, died there on July 3, 1954.

The son of Mr. and Mrs. S. C. Jones, Sr., of Dallas, Dr. Jones was born September 26, 1914, in Dallas. He attended Southern Methodist University, Dallas, and was graduated from the University of Texas School of Medicine, Galveston, in 1938. He interned and took a residency in internal medicine at Henry Ford Hospital, Detroit. From 1941 to 1946, Dr. Jones was on active duty with the United States Army Medical Corps, having served in the China-Burma-India theater. He was discharged as a major and was a lieutenant colonel in the Air Corps Reserve at the time of his death. After beginning his practice in Dallas in 1946, Dr. Jones moved in 1947 to Texarkana, where he practiced his specialty of internal medicine.

A member of the Texas and American Medical Associations continuously since 1946, Dr. Jones was first a member through Dallas County and then through Bowie County Medical Society. Dr. Jones was certified by the American Board of Internal Medicine; was a member of the Southern Medical Association, the Texas Heart Association, and the American Heart Association; was a fellow of the National Gastroenterological Association and the International Academy of Medicine; and was an associate fellow of the American College of Physicians. He was on the staff of St. Michael and Texarkana Hospitals.

Dr. Jones was a member of Alpha Omega Alpha honorary medical fraternity, Phi Chi medical fraternity, and Sigma Alpha Epsilon fraternity. He was a member of the Board of Stewards of the First Methodist Church in Texarkana. Having attended the School of Tropical Medicine in Calcutta, India, Dr. Jones lectured on that subject as an associate professor of medicine at the University of Arkansas School of Medicine, Little Rock, for the last few years.

He and the former Miss Gudrun M. Johnson were married on May 2, 1940, at Green Field Village, Dearborn, Mich. Survivors include his wife; two daughters, Sheila Jones and Victoria Jones; and two sons, William Edgar Jones, Jr. and Samuel Jones, Texarkana. Also surviving are his mother, Dallas; three brothers, James W. Jones, Spur; and S. C. Jones, Jr. and George F. Jones, Dallas; and a sister, Mrs. J. A. Cooper, Hillsboro.

R. DAWES

Dr. Raymond Dawes, Houston, Texas, died in a local hospital on August 3, 1954, of a cerebral hemorrhage.

Born in Ripon, Wis., on March 20, 1870, Dr. Dawes was the son of Hector and Jane (Ruggles) Dawes. He was a graduate of Ripon College, and of Dearborn Medical College, Chicago, in 1907. Dr. Dawes practiced in Chicago until 1913, when he moved to Houston.

Through Harris County Medical Society Dr. Dawes had been a member of the Texas and American Medical Associations continuously since moving to Texas, and he was elected an honorary member in 1950.

Dr. Dawes was a captain in the Army Medical Corps during World War I. He was a Scottish Rite Mason, a Shriner, and a member of the Presbyterian Church. Dr. Dawes was a descendant of William Dawes, who rode with Paul Revere on the night of April 18, 1775, taking the route from Boston to Concord. He was a second cousin to the late Charles G. Dawes, who was vice-president of the United States from 1925 until 1929.

Dr. Dawes and the former Miss Margaret Lahan were married on February 12, 1901, in Chicago. She died on October 6, 1939. He is survived by a son, Edward Lahan Dawes, Chicago; two granddaughters, Misses Patricia Ann Dawes and Marylahan Dawes; a grandson, Raymond Hector Dawes; and a nephew, Neil B. Dawes, all of Chicago.

G. BARTLETT, JR.

Dr. Glenn Bartlett, Jr., of Falfurrias, Texas, died in a local hospital on June 25, 1954, of coronary occlusion.

The son of Dr. Glenn Bartlett, Sr., and Mary (Haynes) Bartlett, Dr. Bartlett was born May 9, 1904, in Shafter. He attended Southwestern University, Georgetown, and the University of Texas, Austin, prior to entering the University of Texas School of Medicine, Galveston. After being graduated in 1931, Dr. Bartlett interned at Jefferson Davis Hospital, Houston, and did postgraduate work at Central Park Clinic, Buffalo, N. Y. He practiced in Buffalo and Sherman, N. Y., until 1938 when he moved to Texas. He practiced in Harlingen, San Diego, and Laredo before moving to Falfurrias. He specialized in surgery.

Dr. Bartlett had been a member of the Texas and American Medical Associations almost continuously since 1938, when he moved to Texas, being a member primarily through Brooks-Duval-Jim Wells Counties Medical Society. In New

York he had belonged to Erie County Medical Society. In 1940 he and his father began the Bartlett Hospital in Falfurrias, and Dr. Bartlett continued its operation alone after the death of his father in 1945. He was a member of the Catholic Church.

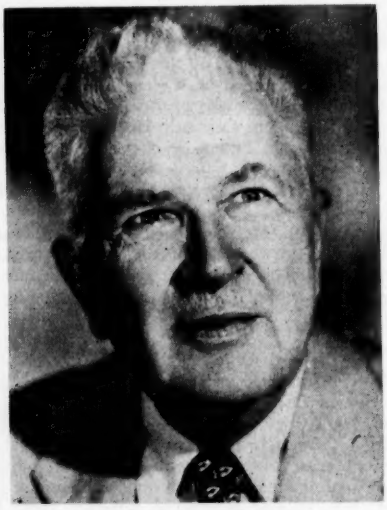
Dr. Bartlett and the former Miss Barbara Margaret Reimann, Buffalo, N. Y., were married January 6, 1938, in Tyler. He is survived by his wife; a son, Glenn Bartlett, III, Falfurrias; and two sisters, Mrs. G. Fry, San Antonio, and Mrs. Lee Daniels, Aransas Pass.

H. G. HEANEY

Dr. Harry Gilbert Heaney died on July 3, 1954, at his home in Corpus Christi, Texas, from hypostatic bronchial pneumonia and pulmonary edema.

The son of Dr. and Mrs. Alfred George Heaney, Dr. Heaney was born on April 11, 1878, in Thomaston, Conn. In 1882 his family moved to Corpus Christi. He was graduated from Texas Military Institute, San Antonio, and as valedictorian from the University of the South Medical Department, Sewanee, Tenn., in 1900. After an internship as clinical assistant at the Hospital for Diseases of the Chest, London, Dr. Heaney did postgraduate work in London, Edinburgh, and Paris from 1902 until 1905, when he began practicing in Corpus Christi. He retired in 1947 after a coronary occlusion.

A charter member of the Nueces County Medical Society and a member of the Texas and American Medical Associations almost continuously since 1905, Dr. Heaney was elected an honorary member of the state organization in 1948. He was a fellow of the American College of Surgeons and an early member of the Texas Surgical Society. He also belonged to the Fifth and Sixth Districts Medical Society. A member of Phi Gamma Delta fraternity, Dr. Heaney had served as city commissioner; president of the Rotary Club, of which he was a charter member; president



DR. HARRY G. HEANEY

of the Elks Lodge; senior warden of the Episcopal Church of the Good Shepherd; and a member of the Board of Regents of the University of the South. He was a thirty-second degree Mason and a Shriner.

Known for his interest in young people, Dr. Heaney entertained as many Navy men from the Naval Air Station and from ships visiting the port in Corpus Christi as his home would accommodate during World War II. Recently, Dr. Heaney arranged for Ringling Brothers, Barnum and Bailey Circus to entertain the children in Memorial Hospital while the circus was in town.

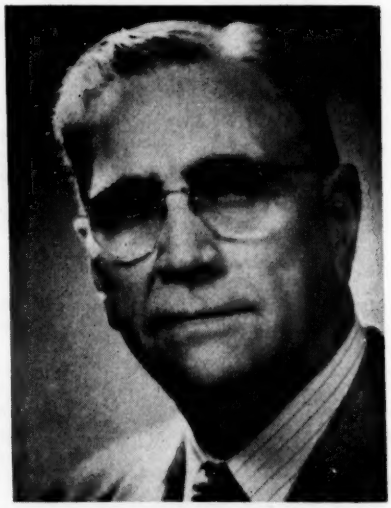
Dr. Heaney and the former Miss Mabel Winifred Pilter were married in Paris, France, in 1905. She survives, as do two sons, Dr. H. Gordon Heaney, Corpus Christi, and Dr. John P. Heaney, San Antonio; two daughters, Dr. Katheryn Heaney Heymann and Mrs. William F. White, Jr., Corpus Christi; two sisters, Mrs. Roy Miller and Mrs. Richard King, Corpus Christi; and twelve grandchildren.

F. E. SADLER

Dr. Finis Ewing Sadler, Abilene, Texas, died on June 1, 1954, in Abilene of cancer of the tongue.

The son of John W. and Belle (McGee) Sadler, Dr. Sadler was born on February 10, 1879, in Bonham. In 1904 he was graduated from the Memphis Hospital Medical College, Memphis, Tenn. Except for a short time, he practiced in Oklahoma until 1948, when he moved to Midland.

Dr. Sadler was on the staff of the Oklahoma State Department of Health for several years, working in the fields of maternal and child health and tuberculosis control. He was superintendent of the State Veterans Hospital in Sulphur, Okla., for fourteen years, except for a brief period when he served as director of the Corsicana-Navarro County



DR. F. E. SADLER

Health Unit. Dr. Sadler took over the Midland-Ector-Howard Counties Health Unit in 1947, and he became director of the Abilene-Taylor County Health Unit in 1952.

He had been a member of the Texas and American Medical Associations since 1948, first through Andrews-Ector-Midland Counties and then through Taylor-Jones Counties Medical Society since 1952. Dr. Sadler served as a first lieutenant in the Medical Corps Reserve during World War I. He was a member of the Presbyterian Church.

He is survived by his wife, the former Miss Mary Louise McMillan, whom he married February 10, 1945. She is now living in Midland. Also surviving are one son, Ewing C. Sadler, McAlester, Okla.; two daughters, Mrs. Hugh Hall and Mrs. Ed Rector, both of Oklahoma City; and three brothers, H. E. Sadler, Marlow, Okla.; J. R. Sadler, Port Arthur; and L. R. Sadler, Corpus Christi.